

# **NATIONAL INSTITUTE OF SIDDHA**

**Tambaram sanatorium, Chennai-47.**

**(Affiliated to the Tamil Nadu Dr. M.G.R Medical University, Chennai-32)**

**A study on**

## **RATHTHA MOOLAM**

**(Dissertation subject)**



**For the partial fulfillment of the requirements to the degree of**

**DOCTOR OF MEDICINE (SIDDHA)**

**Branch-I – Maruthuvam**

**SEPTEMBER - 2007**

## **CERTIFICATE**

Certified that I have gone through the dissertation submitted by **Dr.H.NALINI SOFIA** a student of final MD(S) Branch-I, Department of Maruthuvam, National Institute of Siddha, Tambaram Sanatorium, Chennai-47 and the dissertation work '**A study on RATHTHA MOOLAM**' has been carried out by individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

Place: Tambaram Sanatorium, Chennai-47

Date:

HOD & Professor,  
Department of Maruthuvam,  
National Institute of Siddha,  
Tambaram Sanatorium, Chennai-47.

# CONTENTS

	Page. No
Acknowledgement	i
Abstract	iv
Introduction	v
1. Aim and object	1
2. Literature Review	
2.1 Siddha aspects	2
2.2 Modern aspects	49
3. Materials and Methods	83
4. Observation and Results	88
5. Discussion	107
6. Summary	112
7. Conclusion	113
Annexure	
Annexure –I Preparation and properties of Trial Drug	114
Annexure –II Bio chemical analysis	121
Annexure –III Pharmacological evaluations	123
Annexure –IV Forms	132
Bibliography	141

## ACKNOWLEDGEMENT

It is my proud privilege to keep on record my deep respect and gratitude to **Dept.of AYUSH, Ministry of Health&Family welfare, Govt.of India** for giving me a great opportunity to carry out this dissertation work in National Institute of Siddha, Tambaram sanatorium, Chennai-47.

In all humility, I salute with grate thanks to the **Tamilnadu Dr. M.G.R Medical University and Directorate of Indian Medicine and Homeopathy**, Chennai, for granting permission to take this study.

I am thankful to **Prof. (Dr). V.Arunachalam, MD(S)**, Director, National Institute of Siddha, Tambaram sanatorium, Chennai, for providing me this opportunity to carry out this dissertation work.

It is with great pleasure that I expressed my heartfelt gratitude to **Dr.K.Manickavasakam, MD(S)**, HOD& Professor, Department of Maruthuvam, National Institute of Siddha, Tambaram sanatorium, Chennai, for his valuable guidance, constant advice and suggestion for carrying out this work in the best possible manner.

I gladly acknowledge **Dr.M.Logamanian, MD(S)**, Associate professor, Department of Maruthuvam, National Institute of Siddha, Tambaram sanatorium, Chennai, for his valuable advises and helps during this study.

I am deeply indebted to **Dr.G.Ujjevanam, MD(S)**, Lecturer, Department of Maruthuvam, National Institute of Siddha, Tambaram sanatorium, Chennai, who have sent words of encouragement and suggestions for this study.

I am deeply indebted to **Mr.P.Jeyabal, M.sc**, Asst.Professor (Bio statistics), National Institute of Siddha, Tambaram sanatorium, Chennai, for his valuable help throughout this study.

I thankfully acknowledge **Dr. Subbaraghavalu, M.D**, Assistant professor, Madras Medical college& hospital, Chennai for his suggestions during this study.

I thank to **Metex Laboratory of India**, Guindy, who help me to do the Biochemical analysis of the trial drug in this study.

I thank to **Mr.Anbu, M.Pharm**, Vel's college of pharmacy, who help me to do the pharmacological evaluations of the trial drug in this study.

I extend my sincere thanks to **each and every faculty of NIS** for their guidance throughout this dissertation work.

I would like to convey my thanks to **Mrs.A.Vimala &Mr. J. Rathinam**, Library Assistants, National Institute of Siddha, Tambaram sanatorium, Chennai, for their kindly help during this study.

I am extremely indebted to **Dr.Thomas M. Walter MD(S)**, Assistant Lecturer, Government Siddha Medical College, Palayamkottai, for his affectionate & enthusiastic encouragements, perpetual support for the successful completion of this dissertation work.

I particularly wish to express my sincere appreciation for the help and cooperation extended to me by **Dr.Karu.Karthikeyan, MD(S)**, **Dr.H.Vetha Merlin MD(S)**, who have been kind enough to offer suggestions to carry out this work in the best manner.

I offer my thanks to **Dr.Walter's family** for their dedicated help. Without their understanding & faithful support, this work would not have been possible.

I thankfully acknowledge the encouragement received from my friends **Dr.V.Sreedevi, Dr.S.Bhuvana, Dr.J. Shebha & Dr. G.Thangam**

I would like to convey my thanks to all my **post graduate colleagues, NIS**, for their valuable help during the study.

Most of all I would like to thank **my parents, my brothers and sisters** for all the support and love they have given to me always you are the reason behind my every successful step.

There are **many others** who, in so many ways, have contributed to and assisted in this work. I acknowledge their contributions, and will always be grateful to them.

I would like to thank **Jan computers**, Chennai – 47. for their help in this work.

## ABSTRACT

***Raththa moolam*** (Haemorrhoids) is a common affliction and have been described and treated for more than 4000 years. It is a fact that 50-85% of the world's population will be affected by haemorrhoids at one or another episode in their life time. Although uncomfortable and embarrassing in nature, it is not normally a serious condition and only a small number seek medical attention. Haemorrhoids that cause problems are found equally in men and women, and their prevalence peaks between 45 and 65 years of age.

The controllable, preventable and curable medicines are available in our Siddha system of medicine for Raththa moolam.

***Naagarathi Elagam*** is one of the best Siddha medicines. The trial medicine was tested to best of biochemical and pharmacological analysis and the results were also observed.

Fifty patients of both sexes were selected by the author and they were administered with the trial drug, *Naagarathi Elagam* 2 tablets (2.1gm each) two times daily with honey.

44% of the cases showed very good clinical improvement while 48% of the patients showed good clinical response. 8% showed fair clinical improvement.

## INTRODUCTION

**Siddha system** of medicine, the heritage of the Tamils being practiced in South India since time immemorial is special, significant, most respectable and of high order. Every system of medicine promotes the adage “Prevention is better than cure”. But Siddha system of medicine can help us to live a healthy, natural life by preventing diseases. *Siddhars* are pioneers of metal therapy to compact major as well as minor ailments successfully. It is well known that all the eyes of the world are turning to the natural system of medicine, especially indigenous system of medicine to find out a more acceptable drug for incurable diseases.

Medicine is an ever – changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required.

The World Health Organization (WHO) has documented that the vast majority of people (75-80%) mostly living in the “developed industrialized nations”, prefer and resorts to Alternate (Traditional) Medicine for treating common ailments and chronic diseases. Among these traditional system of medicines ‘SIDDHA SYSTEM’ has definite answers for chronic ailments and also for challenged diseases.

*Siddhars* have developed one of the aspects of diagnosis and prognosis of diseases by reading the pulse which is unique in Siddha system and is unknown to any other Traditional system of medicines in the world. There are eight kinds of diagnosis in Siddha and the *Siddhars* have diagnosed the diseases by pulse reading (*Naadi*) alone in detail.



Ano rectal disorders may cause significant morbidity, primarily as a result of pain. As with general population, (*Moola rogam*) haemorrhoidal disease is the most common surgical ailments which we often come across in surgical out patients department. To have a treatment which is less morbid and does not require surgical procedure allowing patient to carry out normal routine activities will be better.

During literary review of Siddha texts, the preparation '*Naagarathi Elagam*' seemed to be a promising drug for *Raththa moolam*. The selection of the trial drug '*Naagarathi Elagam*' was adopted from *Anuboga Vaidhiya Navaneetham*; part 8; page no: 4 by Hakeem P.M. Abdullah Sayabu.

## AIM AND OBJECT

The synonym for ***Raththa moolam*** in ***Siddha system*** is *Kuruthi Eruvai mulai noi* according to *Yugi vaidhya chinthamani*. It is a vascular disorder that causes bleeding per rectum during defecation. It affects people in their active period of life and causes severe physical and mental embarrassment.

The primary aim of this present study is to expose the most efficacious, easily available, cost effective and safe herbal drug for the treatment of *Raththa moolam*. In that way, the effectiveness of *Naagarathi Elagam* in Biochemical, Pharmacological and Clinical aspects are being studied. The secondary aim is to find out the side effect or adverse reactions of the drug, if any. The objective of this present study would involve the observation of *Naagaraathi elagam* when given internally.

The study is further accomplished with the help of various literary collections from *Siddha* and Modern texts.

## SIDDHA ASPECTS

*Siddhars* classified diseases into 4,448 and described each one separately and elaborately. They classified the diseases on the basis of *Vaatha*, *Piththa* and *Kapha*.

***Raththa moolam*** is one among the twenty one types of *moola noigal* described in *Yugi Vaidhya chinthamani*. *Moolam* in *Siddha* means the area *Moolaathaaram* or the root. *Moolaathaara* area has been given maximum importance in *Siddha* system as it is the energy centre of the body, the *Kundalini*. Although there are other *Moolaathaara* areas in the body this area is the foremost energy centre. This is explained as follows,

“பாங்கான குண்டலிக்குள் மூலமொன்று  
பாரப்பா கண்டத்தில் மூலமொன்று  
போங்கான புருவமைய மூலமொன்று  
புகழான விந்துவிலே மூலமொன்று  
வாங்கான சக்தியிலே மூலமொன்று  
மருவிநின்ற பராபரத்தில் மூலமொன்று  
தேங்காம லிதையாறுங் கண்டஞானி  
சேர்ந்து நின்ற மும்மூல யோகியாமே.”

-Sattai muni gnanam

### ***Thathuvam* aspect**

*Moolaathaara* area is situated in the *Akkini mandalam* and *Vaatha* area that is below the navel. So predominantly *Boothams* out of the *pancha boothams* are *vaayu*, *Aahaayam* and *Theyu*. *Theyu* is for *akkini mandalam* and the rest for *vaatha* area.

This structure makes this area having more kinetic (due to *Vaayu*) and thermal energies (due to *Theyu*) to facilitate the normal acts of micturition, defaecation and parturition. To control defaecation and to carry out *Kanmavidayam visarkam*, the *bootham* involved is *Neer*. The *kanmenthirium* involved here is *Eruvai*.

*Vaayu* and *Aahaayam* together constitute *vaatham*. *Vaatham* in the body manifests as ten types. The types directly concerned with *moolaathara* area are *Abaanan*, *Piraanan* and *Devathaththan*. *Abaanan* is a *vaayu* having *Theyu* predominance in its structure. In relation to *malaasayam* it effectively expels faeces since it has both kinetic (due to *Vaayu*) and metabolic thermal energies (due to *Theyu*). *Piraana vaayu* takes its course via *moolaathara* area and it takes *Saaram* from here and disperses to all the tissues of the body in addition to its main function of respiration. *Devathaththan* relates the mental state of a human being with the lower gastro intestinal tract. It normally resides in the rectum and is responsible for anxiety, anger, quarrelling and laziness.

*Theyu* in *malaasayam* manifests as *moolakkini*. *Moolakkini*, a kind of *akkini* in the body gives the required metabolic thermal energy to *malaasayam* to facilitate the normal act of *visarkam*.

*Neer bootham* carried out the act of *visarkam* in the *kanmenthirium Eruvai*. The action of *neer bootham* is very essential. Since uncontrolled action by *Vaayu*, *Aahayam* and *Theyu* may result in derangement of normal bodily function.

In the *Naadis* the *malaasaya naadi* is *Gugu*. *Suzhumunai naadi* also has its base in the *moolaatharam*. These *naadis* carry out coherent action of other systems in normal acts of digestion, absorption and defaecation. This is given in *Siddha* texts as,

“தேறவென்றல் குகுவென்று நரம்புதானும்

செயலாக முன்சொன்ன முக்கோணில் நின்று  
கோணாகும் அங்கு நின்று நார்போலே  
கொடுமையடா அந்நரம்பு மேல்போட்டாக  
அபானத்தில் முன்னளவாய் அங்கே நிற்கும்  
காருதிகம் உளப்பை நரம்பிதாமே  
தானென்ற நரம்பெல்லாம் இசைவாக  
துண்டுபோல் தேகத்துள்ளே  
அன்னமது உண்பதற்கும் தெகிப்பதற்கும்”

-*Theraiyar narambu sootthiram-150*

### Control by *Narambu*

In *Theraiyar Narambu Sootthiram*, nine *narambugal* are held responsible for deglutination, digestion, absorption and defaecation. Out of these one *narambu* is held responsible solely for the purpose of *visarkkam*. This *narambu* divides into four branches in the *moolaatharam* and supplies large intestine, urinary bladder, *sukkilaasayam*, *karriral* and *swasa pai*. This *narambu* in association with other *thathuvams* such as ten *vaayus* carry out the act of *visarkkam*. It is mentioned in the following verse,

“காணும் முப்பத்திரண்டு முழம் குடலைதானும்

மூலாதாரத்தில் இதழொன்றாய் நாலும் சென்று  
சோறான ஓரிதழ்தான் சுக்கிலத்தில் சென்று  
சென்று மலசலாதிகளை தள்ளிப்போடும்  
பொறியான முன்றிதழும் பவளப் பையில்  
சேர்ந்து முதுக்கிணையது போல் இரைகள்குழந்து  
கொண்டாடி அங்கிருக்கும் இதழ் முன்றாலே  
ஓன்றான குடல்நரம்பு திரளாய் நின்று

ஊக்கமுள்ள காரீரல் தன்னில் தாமரை  
நூல் வளையம் போல் மோதி நிர்க்கும்  
நிர்க்குமந்த நரம்பதுவும் சுவாசப்பையில்  
தண்டதுக்கும் உறவாச்சு மலத்தைப் போக்கும்  
பேரான தசவாயுவின் பெலத்தாலே  
இருத்துத் தள்ளுமடா மலத்தைத் தானே.”

-Theraiyar Narambu Soothiram-150

### **Importance of Varmam**

Several *varmams* are located in and around the anus and anal canal. Of all *moolaathara*, *Ull sarvanga adangal* is often used to arouse an unconscious patient, when other *adangals* fail. For males this *adangal* is located 2.5cm above the external anal sphincter in the anal canal. This *adangal* is effective since *moolaathara* area has connections with all other *chakaras*. Being the base for *chakaras* it indirectly controls all other *chakaras*. So *moolaathara* area and normal *varma nilai* are vital for the normal functioning of the body.

### **Udal koorugal aspect**

The *udal koorugal* aspect of the gastro intestinal tract and particularly that of rectum described in *Siddha* text are as follows. The total length of the gastro intestinal tract is thirty two *muzham*. The continuous peristalsis is mentioned as, “அடைவாடி நிற்குமடா குடலில் தானும்” and the spindle like shape of the intestine occurring during peristalsis and the taeniae in the large intestine are known as “*Arai*”. These are 1008 in number. They look like *kumuzhi* i.e. bubble like masses in a long tunnel.

These structures are controlled by the six *charkas* and the *Guru Naadi*. In the pelvic region the adjacent related organ is the urinary bladder which lies by left, where as large intestine lies to the right. In the *moolaathara* area the large intestine is to function normally in association with other system in the region particularly related to *vaayus*, *Vairavan* and *Sanguni*. In the large intestine in addition to digested food there are *irai*, *kirumi*, *puzhukkal* corresponding to micro organisms and parasites.

In the lower most regions, i.e. the anal canal there is a special apparatus to open and close the canal whenever necessary. This is mentioned as, “*Thaazhpaazh*”. This relates to the anal sphincters at the end of the anal canal. These things are mentioned in the verse as follows,

“கூறவே முப்பத்திரண்டு முழம் குடல்தானும்  
முறையாக ஆயிரத்து எட்டு அறையுமாகும்  
அறையென்றால் நுரையதுபோல் குமிழியாக  
அடைவாடி நிர்க்குமடா குடலில்தானும்  
கம்பத்தி லறையிட்டாப் போலே யந்த  
கருங்குடலில் இதனளவும் ஆயிரத்தி எட்டு  
ஆதாரம் ஆறுக்கும் குருநாடிக்கும்  
அறையறையாய் குடலணை போல் நின்று  
அறையாக இடப்பக்கம் சலப்பைக்குள்ளே  
வலப்பாகம் குடல்நாளம் சங்கினோடே  
வைரவனும் சங்கினியும் அங்கே நின்று  
வளர்க்குமடா சங்கதையும் உறவாடி சுழியில் வந்து  
அங்கு நிர்க்கும் மூலத்தில் குழல்தானென்ற  
ஒளிவான அக்குழல்தா னறையும் பூட்டி

கதவில் தாப்பாளிட் டோப்போ லடைப்பட்டாப்போல்  
அடவாக அதன் வழியாய் மலம்தான் போகும்  
அங்கவர்கள் துண்டுசூடல் நாளத்தோடே  
சோடான அக்குழலில் அறைகள் தோன்றும்  
சொகுசான கிருமியிரை புழுக்களெல்லாம்  
ஈக்கள் மொய்த்தாப்போல யந்த நரம்பில்குற்றி  
இருக்குமடா எந்திரத்தில் கருவி பாசம்.”

-Theraiyar narambu soothiram-150

## MOOLA NOIGAL

**Moola noigal** are diseases that occur in and around *moolaatharam*. They include a wide variety of ano rectal diseases.

**Veru peyar** (synonym of *moola rogam*)

*Adi mulai noi, Arippu noi and mullai noigal.*

**Noi enn** (Classification)

*Moolam* has been classified into various types by different authors. Some of the types are tabulated below.

*Yugi munivar* in **Yugi Vaidhya Chinthamani** describes **twenty one** types of *moola noigal*, of which *Raththa moolam* is one among them. The verse is,

“சனிப்பான மூலத்தின் பெயரே தென்னில்  
சமரசமாம் நீர்மூலஞ் செண்டுமூலம்  
முனிப்பான முளைமூலஞ் சிற்றுமூலம்  
முர்க்கமாம் வரண்மூலம் ரத்தமூலம்



தினிப்பான சீமூல மாழிமூலம்  
திணியான தமரகமா மூலத்தோடு  
வனிப்பான வாதமொடு பித்தமூலம்  
வகையான சேட்டுமத்தின் மூலமாமே.”

“வகையாகுந் தொந்தமா மூலத்தோடு  
வளர்கின்ற வினைமூலம் மேகமூலம்  
பகையாகும் பவுத்திரமா மூலத்தோடு  
படர்கிரந்தி மூலமொடு குதையாமூலம்  
புகையாகும் புறமூலஞ் சுருக்குமூலம்  
பொருகின்ற சவ்வாகு மூலத்தோடு  
துகையாகு மூலந்தானிருபத் தொன்றும்  
சூட்கமா யிதனுடைய சுருபங்கேளே.”

-Yugi Vaidhya chinthamani

## Types

1. Neer moolam
2. Chendu moolam
3. Eruvai moolam
4. Siru moolam
5. Varall moolam
- 6. Raththa moolam**
7. Seezh moolam
8. Aazhi moolam
9. Thamaraga moolam
10. Kuzhi moolam
11. Kazhalal moolam

12. *Kutha moolam*
13. *Veli moolam*
14. *Churukku moolam*
15. *Savvu moolam*
16. *Vali moolam*
17. *Azhalal moolam*
18. *Aiya moolam*
19. *Mukutra moolam*
20. *Vinai moolam*
21. *Mega moolam*

#### **Curable types**

1. *Neer moolam*
2. *Peru moolam*
3. *Varal moolam*
- 4. *Raththa moolam***
5. *Vali moolam*
6. *Azhal moolam*
7. *Mega moolam*
8. *Kuzhi moolam*
9. *Kazhal moolam*
10. *Veli moolam*
11. *Churukku moolam*
12. *Savvu moolam*

### **In curable types**

1. *Chendu moolam*
2. *Siru moolam*
3. *Seezh moolam*
4. *Aazhi moolam*
5. *Vinai moolam*
6. *Ayia moolam*
7. *Kutha moolam*
8. *Mukutra moolam*
9. *Thamaraga moolam*

*Agasthiyar* in ***Agasthiyar pari pooranam*** describes **nine types** of *moolam*. He includes *Raththa moolam* one among them. The types are (*Nava moolam*),

1. *Ull moolam*
2. *Pura moolam*
3. ***Raththa moolam***
4. *Seezh moolam*
5. *Mulai moolam*
6. *Moola paandu*
7. *Vali moolam*
8. *Azhal moolam*
9. *Ayia moolam*

*Vaidhya Sara Sangiragam* and *Aavialikkum amutha murai churukkam* also accept *Agasthiyar* classifications.

In *Anubava Vaidhya Deva Ragasiam*, *moolam* is classified into **six types**.

1. *Vaatha moolam*
2. *Pittha moolam*
3. *Silathuma moolam*
4. *Thontha moolam*
5. *Thiri thosha moolam*
6. ***Raththa moolam***

In *Jeeva Ratchamirtham*, *moolam* is classified into **four types**. It doesn't classify on the basis of *mukkutra* theory rather than it is classified on the basis of heredity etc.

The four types are,

1. *Sagasa moolam*
2. *Uththarasa moolam*
3. *Sutka moolam*
4. *Aarthira moolam*

Here the tendency to have *moola rogam* lie in the genetic code itself. It is the only text in which the author has quoted of direct evidence for a hereditary role in *moola noigal*.

**Theraiyar** describes ten types of *moola noigal*; of witch *Raththa moolam* is not included. The types are,

“சீயொழு கியதுபு ணீரொழிகியதுறு தீயொழுகியதுபவி  
னீயொழு கியதற லேயொழு கியதத னேயொழு கியதுதசைக்  
காயொழுகிய தழு மோரொழுகிய தடர் காலொழு கியதுமுளை  
யேயொழு கியதினை மூலம் தாய்நெறி யேர்பெறு மோர்ப்.தே”

-Theraiyar sekarappa 253

### 10 types

1. *Seezh moolam*
2. *Pun moolam*
3. *Thee moolam*
4. *Neer moolam*
5. *Mulai moolam*
6. *Sathai moolam*
7. *Kaduppu moolam*
8. *Veluppu moolam*
9. *Kaatru moolam*
10. *Peru mulai moolam*

**Cega Rasa Kesaram** classifies *moolam* into **twenty types**. It includes *Raththa moolam* one among the twenty types. The types are,

1. *Vaatha moolam*
2. *Piththa moolam*
3. *Kapha moolam*
4. *Vaatha piththa moolam*
5. *Piththa vaatha moolam*

6. *Piththa silethuma moolam*
7. *Sedha vaatha moolam*
8. *Sada vaatha moolam*
9. *Silethuma sala moolam*
10. *Ull moolam*
11. *Ularthu moolam*
12. *Athisara sura moolam*
13. *Thosa thontha moolam*
14. *Vaatha rattha moolam*
15. *Vaatha kerpa moolam*
16. *Piththa vaatha thontha moolam*
17. *Piththa silethuma thontha moolam*
18. *Kanda moolam*
19. ***Raththa moolam***
20. *Serpa moolam*

## ***RATHTHA MOOLAM***

In ***Siddha system***, most of the *Siddhars* speaks of the *Raththa moolam*. From its name itself one can understand its special characteristics i.e. bleeding per rectum. If this type of *moolam* exists, it must be corrected immediately; otherwise it will lead to anaemia and other complications.

### ***Veru peyar* (synonyms)**

*Kuruthi Eruvai mulai noi.*

### ***Eyal* (Definition)**

Literally *Raththa* means blood and *moolam* means the ano rectal region. To say it correctly *Raththa moolam* is a disease characterized by bleeding per rectum during defaecation, weakness, head ache, palpitation and constipation.

### ***Noi varum vazhi* (Aetiology)**

*Yugi munivar* elaborately describes the various causes for all *moola noigal*. Although the text does not mention causes separately for each type, collectively within two verses it deals psychological, *karmas*, intrinsic and extrinsic factors of aetiology for all *moola noigal*. With this and other *Siddha* texts we can say the causes of the disease as,

1. *Karmas* and psychological causes.
2. Due to inappropriate diets and acts.
3. Due to maintaining wrong postures in *yogasanas*.
4. Due to deranged *varma nilai*.

The *karmas* and psychological causes include,

1. Chiding the elders.
2. Doing harm to others.

3. Indulging in rape.
4. Thinking of doing harm in the mind but saying sweet words in front
5. Living a luxurious life when neighbors and relatives are in hunger.
6. Always quarrelling with others.

This basically vitiates the *piththam* and later, causes derangement of *vaatham* and eventually leads to *Raththa moolam*. This is explained in *yugi vaithya chinthamani* as follows,

“முனையாக முத்தோரை வைதலாலும்  
 மோசங்கள் பண்ணியே கற்பழித்தும்  
 நினைவாக நினைவிலொன்றும் வாக்கிலொன்றும்  
 நேர்ந்தபடி சொல்லுகின்ற நீட்டுநற்கும்  
 பனையாக பரதேசி பந்துவானோர்  
 புசித்திருக்க உண்டதோர் பாதகற்கும்  
 தனையாகச் சமாதானந் தவிர்க்கின்றோர்க்கும்  
 சண்டாள **மூலம்** வந்து சனிக்குந்தானே”

-Yugi vaithya chinthamani

*Moolam* is a *karma* disease and is proved from the verse of *Agasthiyar kanma kanda* as

“நீக்காத மூலநோய் கன்மத்தாலே  
 நிலைகெட்ட அபானத்தில் நெருப்போமீறி  
 வாக்காலே யபானத்தின்வாசல் தன்னில்  
 வந்து முளை மேகத்தால் சூட்டால் காணும்  
 தாக்கோ லாலடைத் தாற்போல் வாயு நின்று  
 தன்மையள்ள மலமதனை வறட்டித் தீய்ந்துப்  
 பேய்கோலம் பண்ணுமடா **மூல ரோகம்**  
 புலத்தியனே பழவினைகளினி னங்கேளே.”

- Agasthiyar kanma kaandam.



*Karma* theory is based on the belief that one is not dissociated from the fruits of the actions of his previous births.

The other intrinsic causes of inappropriate diet and acts include,

1. Exposure to excessive cold.
2. Exposure to excessive heat.
3. Excessive heat in the body itself due to sexually transmitted diseases.
4. Indulging excessively in sexual act.
5. Consuming foods with pungent, sour and salty tastes.

Here *Yugi munivar* suggests two more psychological causes. They include

1. Always having an angry mood.
2. Anxiety and depression due to heavy loss in business etc.

This is given in *Yugi Vaidhya Chinthamani*,

“தத்தையா மதிகமாங் குளிரினாலும்  
தரியாத வழற்சியாற் கிரந்தியாலும்  
புத்தையாம் பொருந்தாத உஷ்ணத்தாலும்  
புணர்ச்சியாய்க் கோபத்தாற் சலிப்பினாலும்  
கத்கையாம் வெகுகாமம் வேண்டலாலும்  
கடினமா முப்பாலுங் காரத் தாலும்  
மொத்தையாம் வெகுதனங்கள் போனதாலும்  
மூலமவந் துற்பத்தி முனையுந் தானே.”

-Yugi Vaidhya Chinthamani

### **Maintaining wrong yogic postures**

During practice of *yogasanas* maintaining prolonged sitting and straining postures predispose to vitiated *vaatham*, *piththam* and *moolakkini* leading to *moola noigal*.

## Aetiology due to deranged *varma nilai*

Injury to the *utchi varman* if intensive causes immediate collapse. If the trauma is mild then the patient develops difficulty in passing urine and constipation. Constipation in the long run causes *moola noi*. This is explained as *Utchi Varmam* (*konndaikolli varmam*).

“நேறான நெற்றி நடுவதிலிருந்து  
அவரவர் கையதினால் எட்டுவிரல் மேலே  
அளந்துபார்த்தால் தலமுனக்கு தெரியவரும்  
அத்தலத்தில் முறிந்திடினோ குணத்தைக் கேளே  
மேல்மலர்ந்து வளக்குமப்பா வயர்பொருமும்  
பொருமியே சிறுநீரோடு பேதிகட்டும்  
கட்டுமப்பா சன்னியோடு சீதமுண்டாம்  
தப்பாது நாழிகைதான் அறுவதுக்குள்”

If *saathyam*,

“பேசுமே தொண்ணூறுநாள் கழிந்தவுடன் தலைகிறுக்கம்  
பனிகுளிரும் வயிறுதிலே பேதிகட்டும்  
முக்கியமாய் மூலநோய் பதனமாகும்.”

- Subramanியar varma avathai nithanam-500

## Siddha pathology

The human body is made of ninety six *thathuvams*. Alterations in any *thathuvam* results in pathological states. *Raththa moolam* results basically from derangements of *vaatham* and *piththam*. This is best illustrated in the verse,

“அனில பித்த தொந்தமலாது மூலம் வராது “

- Noi naadal noi mudhal naadal part -I

Initially in any pathological state the affected *thathuvams* are the *pancha bootham*. The various aetiological factors of *Raththa moolam* annihilate the normal structure of *Vaayu*, *Aahayam* and *Thee boothams* in *moolatharam*. If this state is allowed to persist then the *bootham* responsible to carry out the *kanmavidayam*, *Visarkam*, *Neer* gets deranged in the very long run.

Since *Vaayu* and *Aahayam* constitute *vaatham* and *Thee* constitutes *piththam*, immediately these two humours derange.

*Vaatham* in the body manifests as ten *vaayus*. Among them those having connections with the anal canal is *Abaanan*, *Piraanan* and *Devathatthan* gets derangements. Simultaneously with the *vaayus*, *naadis* having connections with the *moolatharam* i.e. *Gugu* and *Suzhumunai* along with other *thaththuvams* produce systemic manifestations.

*Piththam* in the body manifests as five types viz *Anal*, *Ranjagam*, *Alosagam*, *Pirasagam* and *Sathagam*. All these are affected in *Raththa moolam*.

*Kapham* deranges very lately if the patient is left untreated for days together to produced *kapha* disease such *sobai* etc.

### **Humoral or *Tridosha* pathology**

*Pancha boothams* are manifested in the body as three vital forces,

*Vaatham*

*Piththam*

*Kapham*

Vitiation of three humours i.e. *vaatham*, *piththam*, *kapham* and derangements of its normal function, is important basic factor for the disease. “அனில பித்த தொந்தமலாது மூலம் வராது”. -*Therayar*.

According to *Therayar* there is no *moolam* with out vitiation of *vaatham* and *piththam*. Among the humours, because of dietetic habits i.e. consumption of excessive tubers, and (except *karunai kizhangu*) chilies and intake of hot food materials the *vali* and *piththa* humours are predominantly affected. Consequently the functions of *abaana vaayu* is deranged (i.e. which is important for excretion and parturition) and normal bowel habit also affected. This leads to constipation. Chronic constipation and straining during defaecation ultimately results in *moola noi*.

In long course this disease affects some of the *udal kattugal*, *Saaram*, *Chenneer* etc. Consequences of this body are debilitated.

### ***Vaatham (or) vaayu***

“முறைமையாம் பிராணனோடபானன் வியானன்  
மூர்க்கமா முதானனோடு சமான னாகன்  
திறைமையாங் கூர்மனோடு கிருக ரன்றன்  
தேவதத்த னொடுதனஞ் சயனு மாகும்”

**-Yugi vaidhya chinthamani**

The word *vaayu* not only implies wind but also comprehends all the phenomena which come under the functions of the central and sympathetic nervous system. Structurally it is the combination of *vaayu* and *aahaya boothams*. So it is affected in *Raththa moolam*. Normally it carries out respiration, circulation of blood, locomotion, carrying sensory signals and motor signals to and from the brain, micturition, defaecation, parturition, sensation of hearing, sight, taste etc.

It is located in *idakalai*, *abaanan*, faeces, spermatic cord, pelvic bones, skin, hairs, nerves and muscles. It has ten types.

1. *Piranan (uyirkal)*

This controls knowledge, mind and the five sense organs, which are useful for breathing and digestion.

2. *Abaana (keezh nokku kaal)*

This is responsible for all downward movements such as passing of urine, stools, semen, menstrual flow etc. In *Raththa moolam* due to the derangement of *Abaana vaayu* all patients suffered from constipation.

3. *Viyanan (paravu kal)*

This is responsible for movements of all parts of the body.

4. *Uthaanan (Mel nokku kal)*

It is responsible for all upward visceral movements such as vomiting, eructation and nausea.

5. *Samaanan (nadukkal)*

This aids in proper digestion.

6. *Naagan*

Responsible for opening and closing the eyes.

7. *Koorman*

Responsible for vision and yawning

8. *Kirukaran*

Responsible for salivation, nasal secretion and appetite.

9. *Devaththan*

Responsible for laziness, sleeping and anger.

#### 10. *Dhananjayan*

Produces bloating of the body after the death. It escapes on the third day after death bursting out of the cranium.

In *Raththa moolam* primarily affected *vaayus* are,

1. *Abaanan*
2. *Piraanan*
3. *Devathaththan*

These deranged *vaayus* affects seven *thathus* and *malams*. Due to this, the symptoms produces in *Raththa moolam* are,

1. Pain in the umbilicus.
2. Splashing of blood during defaecation.
3. Feeling of weakness in the limbs.
4. Head ache.

This is best illustrated in the table below.

<i>Abaanan</i>	<i>Piraanan</i>	<i>Devathaththan</i>
1. Pain in the umbilicus. 2. Splashing of blood during defaecation.	1. Feeling of weakness of limbs. 2. Head ache.	1. Anxiety.

Pain in the umbilicus and splashing of blood during defaecation are symptoms of affected *abaanan*. Feeling of weakness in the limbs, head ache is the characteristic feature of *Piraanan* involvement. *Devathaththan* produces anxiety out of loss of blood every day. In *Raththa moolam*, *vaatham* and *piththam* also gets deranged simultaneously.

## ***Piththam***

It is the life manifestation of *Thee bootham* in the body. It is the metabolic thermal life force of the body. It carries out digestion, absorption, metabolism, colouration of blood etc.

*Piththam* is located in *piraana vaayu*, bladder, *moolakkini*, heart, umbilical region, abdomen, stomach, sweat, saliva, blood, eyes and skin.

### *1. Anal*

It promotes appetite and helps in digestion.

### *2. Ranjagam.*

It gives colour to the blood.

### *3. Piraasagam*

It gives complexion to the skin.

### *4. Aalosagam*

It brightens the eyes.

### *5. Saathagam*

It controls the whole body. It has the property of fulfillment.

As *moolatharam* is in the *akkini mandalam* any pathological condition here can harm *moolakkini* and eventually *piththam*. In *Raththa moolam* all the *piththams* are affected except anal *piththam* initially. Later when *veluppu noi* ensues, it gets also affected leading to reduced appetite. The primary deranged *piththams* are,

### *1. Ranjaga piththam*

### *2. Piraasaga piththam*

### *3. Aalosaga piththam*

### *4. Saathaga piththam*

Symptoms are produced when these deranged *piththams* affected the seven *thathus* and *malams*. These symptoms include,

1. Skin becoming pale in colour.
2. *Veluppu noi*.
3. Eye becoming yellow in colour.
4. Giddiness and emaciation.

This is best illustrated in the table below.

<i>Anal</i>	<i>Ranjagam</i>	<i>Pirasagam</i>	<i>Aalosagam</i>	<i>Saathagam</i>
When <i>veluppu noi</i> ensures later loss of appetite results.	<i>Veluppu noi</i> .	Skin becomes pale.	Eyes become yellowish in colour.	Giddiness and emaciation.

*Veluppu* is due to the derangement of *Ranjagam*, paleness of the skin due to the derangement of *pirasagam*. Yellow colouration of the eyes is due to derangement of *aalosagam*. Giddiness and emaciation are due to the derangement of *saathagam*.

### ***Kapham***

*Kapham* has *neer* and *prithivi boothams*. It is responsible for coordination and defense mechanisms of the body.

*Kapham* is located in *samaana vaayu*, semen, *suzhumunai*, blood, phlegm, bone marrow, nose, chest, nerve, bone, brain, eyes and joints.

#### ***1. Avalambagam***

Lies in the lungs, controls the heart and other *kapham*.



## 2. Kilethagam

Lies in the stomach, makes the food moist, soft and helps in digestion.

## 3. Pothagam

Responsible for identifying taste.

## 4. Tharpagam

Present in the head and responsible for the coolness of both eyes.

## 5. Santhigam

Responsible for the lubrication and free movement of the joints, it is situated in the joints.

Initially in *Raththa moolam*, *kapham* is not deranged but in untreated cases all the five types of *kapham* are affected. This causes pathologic changes in the *thathus* leading to *Sobai noi*.

When *thaththuvams* including *vaatham*, *piththam*, *kapham* are deranged they affect seven *udal thathus* viz; *saaram*, *chenneer*, *oon*, *kozhuluppu*, *enbu*, *moolai*, *sukkilam* or *suronitham* and *udal theese*. They affect three *malams* and in turn produce various symptoms according to the severity and the site of ailment.

In *Raththa moolam* the primarily affected *thathus* are *saaram*, *chenneer* and *oon*. The symptoms of *Raththa moolam* are typically due to the vitiation of these *thathus*. In *udal thee*, *moolakkini* is affected. *Moolakkini* along with *abaanan* causes bleeding per rectum which is the main symptom. Due to the *malam* derangement constipation, irritation around anus results.

*Thirumoolar karukkidai vaidhyam-600* describes the pathology of *Raththa moolam*. Suppression of appetite and defaecation leads to derangement of *vaayu*. This *vaayu* enters *kundalini* area. Here the *vaayu* combines with *theyu* and causes formation of *moola*

*mulaigal*. When excess *vaayu* exerts pressure on them, they bleed on straining i.e. while defaecation. This is given as,

“காயத்தின் மூலங் கண்ட விதங் கேளு  
பாயொத்த தீபனம் பரிந்தே யடக்கினும்  
மாயை மயக்க மலத்தை யடக்கினும்  
ஓயற்ற குண்டலிக்குள் புகும் வாயுவே  
வாயு புகுந்து மலத்தோட பானத்தை  
தேயுவைக் கூட்டித் திரட்டி சுருக்கிடும்  
தேயும் மலம் வரின் சுருக்கி முன்னே  
நின்றேயு முளைபோ லபான னிருக்குமே  
இருக்குஞ் சில மூல மெழு மண்டலம் போல  
மறுக்கரணம் கொண்டு வருஞ்சில மூலம்  
உறுக்கிய வாயுவா லுதிரமும் தான் கூடித்  
தறுக்கி விழுக்காட்டும் தான் ரெத்த மூலமே.

-Thiru moolar karukkidai vaidhyam-600.

*Agasthiyar Guna vagada Thirattu, Pathinen Siddhar aruli seitha naadi, Athma Ratchamirtham, Agasthiyar-1200* and various other *Siddha* texts have the same verses for the pathology of *Raththa moolam*.

*The Raththa moolam* due to *Utchi varmam* also has a pathology implicating *vaayu* and *theyu* in *Therayar narambu sootthiram*. So whatever may be the aetiological factor in *Raththa moolam*, the basically affected *boothams* are *vaayu* and *theyu*. This causes pathological changes in other *thaththuvams* such as seven *thaathus*, *udal thee* and in *malam* to give rise to the symptoms of *Raththa moolam*.

### ***Murkurigal* (preliminary symptoms and signs)**

Vitiated *vaayu* gives consistency and dark colour in the faeces. This leads to constipation. In addition to this there is increased *moolakkini*, derangement of

spermatogenesis, borborygmus and diarrhoea. These symptoms occur before the actual disease symptoms sets in. These are mentioned in the verse given below,

“காணப்பா வாயுவாலுங் கனத்த வபானன் றன்னைப்  
பூணப்பா மலத்தைக் கட்டிப் புகையெனக் கறுக்கி நாளும்  
தோணப்பா முளையைப் போலச் சுருக்கிமுன் மலந்தான் வீழல்  
ஆணப்பா வபானந் தன்னை அழுத்தவே இருக்கும் பாரே.”

- *Siddha maruthuvam*

“மூலமே யெழுந்தபோது மூலத்தில் கனல்தான் மீறும்  
மூலமே யெழுந்தபோது முனைவிந்து நாசமாகும்  
மூலமே யெழுந்தபோது முழங்கவே யிரைச்சலாகும்  
மூலமே யெழுந்தபோது முகிலில்லாக் கழிச்சல் தானே.

- *Thiru molar karukkidai Vaidhiyam-600*

### ***Pothu kuri gunangal* (General symptoms and signs)**

Faeces get a hard consistency which becomes white in colour and their passage in the anus gets blocked as if there is a bud of lotus. Then the pile mass protrudes like a lotus flower with an active play of *vaayu*. Bleeding per rectum occurs like honey drops from the lotus flower. General malaise, physical and mental fatigue also develops.

The disease is an irritating cruel disorder of human being and the affected person looks like an afraid serpent due to heavy thunder. In brief symptoms include,

- Hard consistency and white coloured faeces.
- Constipation.
- Protruding pile mass.
- Bleeding per rectum.
- Malaise.
- Physical and mental fatigue.
- Anxiety and fear.

This is given in the verse as,

“மலமிறுகித் தழையுமேயுஞ் சுவேத மையின்  
வகைமை யெனக் குழற்கடைத் தாமரை போல்  
பலமிதமா யொருவேளை யபானஞ் சுற்றிப்  
பதும முகிழ் விரியமைதிப் பிரசம் போலச்  
சலசலெனப் பொசி குருதித் தில்லை பொங்கத்  
தள்ளாடி வசமழியத் தளர்வுண்டாக்கி  
நிலவரமற் றிடவஞரை யுஞற்று மையா  
நீசத்துவ மூலகுண நிலைமை தானே.”

“கொடிய பொல்லாத மூல குணத்தை  
யென் சொல்வேன் பாந்த  
எரியினி லொடுறங்கு மாறே  
யெவரையுங் கசங்கச் செய்து  
குடிகெடு மாறு செய்யுங்  
கொண்டவ நாயும் கெய்து  
முடிவதனாலே பெயன்று  
மொழிந்தனர் தழைந்த நூலோர்.”

-Theraiyar sekarappa

### **Kuri gunangal (signs and symptoms)**

According to Yugi Vaidhya chinthamani, the clinical features are,

“சேதியாய் தொப்புள்தன்னில் வலித்து நொந்து  
சிறுகதிர்போற் பீறிட்டு ரத்தம் வீழும்  
மேதியாய் மேனிவற்றி வெளுத்துப் போகும்  
மிகக்கைகா லசந்துமே சோகையாகும்  
மாதியாய் மார்பிளக்குந் தலைநோவுண்டாம்  
மயக்கந்தான் மிகுதியாய்த் தள்ளிப் போகும்  
நாதியாய்க் கண்ணிரண்டு மஞ்சள் போலாம்  
நலியும் ரத்தமூலத்தின் பண்புதானே.

-Yugi Vaidhya chinthamani

- Pain in the umbilicus.
- Pallor.
- Feeling of weakness in the limbs.
- *Sobai*.
- Head ache.
- Giddiness and
- Yellowish colouration of eyes.

According to *gunavagadam*, the verse is,

“தொப்புளும் வலிந்து நொந்து துளங்கிடா யிரத்தம் வீழ்ந்து  
அப்பொழுதுள்ள மூலமறியவே வெளியில் தள்ளும்  
தப்பிடா மேனிவற்றித் தறுகிடா தூடே சென்று  
இப்படி ரத்தமூல மொன்றுதா னியம்பலாமே.”

*-Gunavagadam*

- Pain in the umbilicus
- Bleeding per rectum
- Protrusion of the pile mass
- Emaciation

According to *Aavialikkum Amutha murai Churukkam*, the symptoms are,

- Loss of appetite
- Lower abdominal discomfort
- Constipation
- Pain around umbilicus
- Bleeding per rectum
- Anaemia and
- Breathlessness

According to *Cega Rasa Kesaram* the symptoms are,

“இருக்கும் சிலமூல மெழு மண்டலம் போல  
மறுக் கரணங்கொண்டு வளருஞ் சிலமூலம்  
தறுக்கி விழக் காட்டுந்தான் ரத்தமூலமே.”

- *Cega rasa kesaram*

- Presence of pile mass
- Swelling of pile mass
- Bleeding per rectum

According to *Athma Ratchamirtham entra Vaidhya saara sangiragam* the symptoms are,

- Consuming foodstuffs with bitter and sour tastes.
- Body becoming warm.
- Loss of appetite.
- Lower abdominal discomfort.
- Constipation.
- Pain around the umbilicus
- Bleeding per rectum
- Protrusion of the pile mass.
- Initiation and burning sensation in the anus and
- Anaemia.

According to *Thiru molar Karukkidai Vaidthyam-600* the symptoms are,

- Pile mass and
- Bleeding per rectum.

### ***Piniyari muraimai* (Diagnosis)**

Diagnosis is arrived at by *porial arithal*, *pulanal arithal*, *vinaathal* and confirmed by *Enn vagai thervugal viz.*

1. *Naa* (Examination of tongue)
2. *Niram* (Colour of the body)
3. *Mozhi* (Speech)
4. *Sparisam* (Palpation)
5. *Vizhi* (Examination of eye)
6. *Malam* (Motion examination)
7. *Mootthiram* (Urine examination)
8. *Naadi* (Pulse)

In *porial arithal*, *pulanal arithal* and *vinathal* patient's name, age, sex, occupation, income, his *thinai* (environment), complaints, its duration, past history, habits are recorded. The patients are mostly from sedentary workers, they live mostly in a hot environment. The diagnosis is confirmed by the following *Enn vagai thervugal*.

### ***Naa***

If the disease process takes a long course then the *naa* become coated and pale. Except this all other qualities of *naa* are usually normal.

### ***Niram***

Because *vaatham* and *piththam* are affected the colour of the body is as in *vaatha pittha thonnam* i.e. slight dark or yellowish in colour. The colour change is due to *veluppu noi* which ensues after a long course of *Raththa moolam*.

### ***Mozhi***

Due to the affection of *vaatham* and *piththam* patients look anxious and the person's speech reflects his anxiety.

### ***Vizhi***

Eyes become yellowish in colour.

### ***Sparisam***

Body is said to stay in *ushnam* or hyper thermic state. This is due to the combined attraction of *vaatham* and *piththam*.

### ***Malam***

The amount of faeces is reduced. The consistency becomes hard. There is no frothy or mucous. The colour is usually reddish yellow or dark. Constipation is usually encountered.

### ***Mooththiram***

#### ***(i)Neer kuri***

The amount is usually normal. But when *veluppu* and *sobai* develop, the amount is reduced. There is no froth. The colour is usually light reddish yellow.

#### ***(ii)Nei kuri***

Due to the *vaatha piththa thontham* involvement the *nei kuri* is, Serpant and ring shaped.

### ***NAADI***

*Naadi* is vital factor, which is responsible for the existence of life in the physical body. The examination of *naadi* has been recognized as one of the principal means of DIAGNOSIS and PROGNOSIS OF DISEASE FROM TIME IMMEMORIAL.

Any change in the three *dhoshas* is best diagnosed by feeling the *naadi*. The power of *naadi* manifests in the body as three vital forces namely *vaatha*, *piththa* and *kapha*. The three *uyirthathukkal* which organize, regularize and integrate the life activation in each and every living being.



The details of the diagnosis on the basis of the examination of the senses on the basis of eight special examination and integration, confirmed with those findings made on *Naadi pareetchai*.

### ***Naadi nadai in moolam***

“அனில பித்த தொந்தமலாது மூலம் வராது.”

- Theraiyar

In *Raththa moolam*, the normal 1:1\2:1\4 *mathirai* pattern or gait pattern of hen , turtle and frog of *vaatham* , *pihtham* and *kapham* respectively are affected giving rise to elevated *maththirai* of *vaatham* and *piththam* than normal. This is often said in *vallathi naadi* as gait patterns of animals having speedy and forceful gait patterns such as cock for *piththam*. This is given in the verse as follows,

“தானென்ற வாதமது கோழி போல  
சாவலைப் போல் பித்தமது தாண்டுமாகில்  
கோனென்ற வாதபித்த தொந்திப்பாகும்.”

- Vallathi naadi

In *Sathaga naadi*, *vaatha naadi* having twice its normal phenomena is referred as the pathological *naadi* for *moola noigal*.

This is given in the verse as follows,

“வாதமெனும் நாடியது தோன்றில்  
சீதமந்தமொடு வயிறுபொருமல் திரட்சிவாய்வு  
சீதமுறுங் கிராணி மகோதரம் நீரமை  
திரள்வாய்வு சூலை வலிகடுப்புத் தீரை  
நீதமுறுங் கிருமிகுன்மம் அண்ட வாதம்  
நிலையுநீர்க் கரிச்சரங்கள் தந்து மேகம்  
பேதகமா முதரப்பிணி மூல ரோகம்  
பேசுவெகு பிணிகளுமே பொருளதாமே.”

- Sathaga naadi

According to *Gunavagada noin saaram*, *vaatham*, *piththam* and *kapham* are deranged from their normal status in *moola noigal*. This is given in the verse as,

“மூவருமே மந்தமானால் முளைத்திடு மூலமெல்லாம்.”

-*Gunavagada noin saaram*

Also in *vallathi naadi* it is said that *piththaththil vaatham* is the diagnostic *naadi* for *moola noigal*.

“வண்ணமுடன் பித்தத்தில் வாதம் வந்தால்  
வருமாறு பீனிசங்கள் மண்டைக் குத்து  
கண்ணுமடா பவுத்திரங்க ளரையாப்புண்டாந்  
தப்பாது நவமூலஞ் சாருந்தானே.”

- *Vallathi naadi*

According to *Rathna churukkam-500* when *piththam*'s *maththirai* increases to one and *vaatham*'s *matthirai* decreases to quarter, *moola noi* is one of various diseases that occur in this *naadi*. This is explained in the verse as follows,

“காந்தலுண்டாம் பித்தமொன்று வாதங் காலாம்  
கதித்தெழுந்த நாடியடா அம்மைபோல குண்ணும்  
வாந்தியுண்டாம் மந்திக்கு வயிறெரிப்பு  
வளமாக சுரங்காணும் கண்ணும் காந்தும்  
ஊர்ந்துவிடும் பாண்டாகு மாசனத்தில்  
உற்றதோர் மூலமாம் புண்ணுமாகும்.”

- *Rathna churukam-500*

From all these, the conclusion are that most of the *Siddhars* says *vaatha piththa naadi* is the characteristic pathological *naadi* for *moola noigal* which include *Raththa moolam*.

Apart from this, the following natures will also contribute for diagnosis. These regions have their specific names as shown below.

### ***Thinai* (land & place)**

The geographical distribution of the land is classified into five regions.

- (i) *Kurinchi* (Hilly tracts) – Mountains and their adjoining area.
- (ii) *Mullai* (Sylvan tracts) – Forests and their adjoining area.
- (iii) *Marudham* (Agricultural tracts) – Fertile lands and their adjoining area.
- (iv) *Neidhal* (Maritime) – Sea and its adjoining area.
- (v) *Paalai* (Arid tracts) – Desert and its adjoining area.

Each region has its own characters, which influences the inhabitants, physical, mental, economic, occupational and cultural activities. In each region some ailments are endemic based on the climatic features; preventions and curative measure for these ailments are stated in medical literatures.

### ***Kaalam* (seasons)**

With reference to the position of sun, the year is divided into six seasons as follows,

1. *Kaar kaalam* (Early rainy season) – *Aavani& Purattasi*.
2. *Koothir kaalam* (Late rainy season) – *Aippasi& karthigai*.
3. *Munpani kaalam* (Early winter season) – *Margazhi&Thai*.
4. *Pinpani kaalam* (Latter winter season) – *Maasi&Panguni*.
5. *Ila venil kaalam* (Early summer season) – *Chithirai&Vaigasi*.
6. *Mudhu venil kaalam* (Latter summer season) – *Aani&Aadi*.

### **Prognosis**

Even though this is said to be *kanma* disease it is believed to be cured by means of medicines, in the early stage and by surgery in the later stage.

This *moolam* disease has been classified based on the prognosis as curable and incurable.

***Curable types***

1. *Neer moolam*
2. *Peru moolam*
3. *Varal moolam*
4. ***Raththa moolam***
5. *Vali moolam*
6. *Azhal moolam*
7. *Mega moolam*
8. *Kuzhi moolam*
9. *Kazhal moolam*
10. *Veli moolam*
11. *Churukku moolam*
12. *Savvu moolam*

**In curable types**

1. *Chendu moolam*
2. *Siru moolam*
3. *Seezh moolam*
4. *Aazhi moolam*
5. *Vinai moolam*
6. *Ayia moolam*
7. *Kutha moolam*
8. *Mukkuutra moolam*
9. *Thamaraga moolam*

If there is definite cure for any disease, the following conditions should be fulfilled.

1. *Vaatha naadi* should not be reduced to a very low extent.
2. *Piththam* and *kapham* should not get mixed.
3. Normal *udal anal* should not be reduced.
4. *Vaatham* and *kapham* should not go hand in hand.

-*Sootha muni naadi*

In most of the cases of *Raththa moolam* these conditions are met and hence the prognosis is good.

Since the *naadi* in *moola noigal* is *vaatha piththa* combination, this *naadi* can become uncertain when the *maththirai* exceeds to a highest level or when the *vaath piththa naadi* feels like the jumping of a frog.

This is explained in *Sattai muni naadi* as follows,

“சேருவாதஞ் சிறந்ததோர் பித்தமும்  
கூறும்நாவுங் குதிக்கும் மண்டுகம் போல  
விருந்தாலு விளங்கப் பதைத்திடில்  
சேருமென புரஞ்சேர்வது முண்மையே.”

“உண்மை வாத முரைக்கும் பித்தமுடன்  
உண்மைமாத் திரையொன்றுமே மீறிடில்  
உண்மையாமு லொடுங்கி யடங்கிடும்  
உண்மையாங் காலன்வுடல் கொண்டு போவதே.”

- *Sattai muni naadi*

Above all, according to *Yugi vaidhya chinthamani* it is a curable disease. So if early treatment is started to pacify the deranged *vaatham* and *piththam*, it can be cured. Complications in this disease occur when *kabam* gets involved. So arresting the involvement of *kapham* makes the prognosis better.

### ***Noi kanippu vivatham (Differential diagnosis)***

*Raththa moolam* should not be confused with other types of *moola noigal* and other diseases such as *soolai* which also have symptoms like bleeding per rectum. These include,

#### **(i)*Chendu moolam***

Permanent irreducible pile mass does present in the anus resemble *karunai* tuber and this is not present in *Raththa moolam*. Besides this, there is no splashing of blood as in *Raththa moolam*. Hence, there is only discharge of blood and mucous. Mucous discharge is not present in *Raththa moolam* although both the condition has constipation.

- *Yugi vaidhya chinthamani*

#### **(ii)*Mulai moolam***

*Mulai moolam* has protrusion of pile mass in the anus resembling germinating turmeric. In *mulai moolam*, the lower abdomen has a hard consistency which is not present in *Raththa moolam*. Both have bleeding per rectum, constipation and pain around the anus.

- *Yugi vaidhya chinthamani*

#### **(iii)*Varal moolam***

In *varal moolam* the bleeding is not like a splash but like drops of blood while defaecation. Both diseases have constipation, emaciation, anxiety, anger and malaise.

- *Yugi vaidhya chinthamani*

#### **(iv)*Aazhi moolam***

Here there is an external solitary pile mass which looks like dioscorial tuber. Besides this, there is discharge of blood mucous and pus, these are not present in *Raththa moolam*.

- *Yugi vaidhya chinthamani*

(v) ***Thamaraga moolam***

Although it has bleeding per rectum, there is external pile mass, diarrhea which is not present in *Raththa moolam*.

-Yugi vaidhya chinthamani

(vi) ***Azhal moolam***

Here no splash of blood is present. But only discharge of blood and pus. There are tiny pile masses like seeds or rice in anus. These are not present in *Raththa moolam*.

-Yugi vaidhya chinthamani

(vii) ***Churukku moolam***

There is an abscess like mass in the anus which is not present in *Raththa moolam*. Besides this, there is discharge of blood and mucous. Both diseases have *veluppu noi*.

-Yugi vaidhya chinthamani

(viii) ***Raththa soolai***

There is constipation, loss of appetite, belching, distention of stomach and severe stabbing pain in the chest which are not present in *Raththa moolam*. *Raththa soolai* patients notice blood with faeces.

- Thanvanthiri vaidhyam-Soolai nithanam.

(ix) ***Vazhi kuruthiazhal noi***

There is body pain, hemorrhage in dark colour occasionally with froth, hard stools like faecal pellets of goat which are not present in *Raththa moolam* but both conditions have bleeding per rectum.

- Siddha maruthuvam

## Complications

When *moolakkini* is vitiated to a hyper level it will cause many worst complications according to *Thiruvalluva nayanar navarathna chinthamani-800*. The main complications are *veluppu noi* due to deranged *piththam* and *sobai* due to the *kapham* involvement latter. These are mentioned in the *Raththa moolam* descriptions in *Yugi vaidhya chinthamani*.

1. Piles accompanied by swelling of upper and lower limbs, abdomen, face, anal region and umbilicus results in death.
2. If piles come as a complication of ascites and preliminary disease of anaemia, jaundice, peptic ulcer and dysentery .Patient will suffer a lot.
3. If piles come accompanied by ‘*kudha keelam*’ alias ‘*eruvai anai*’ they felt intolerable pain. Emaciation and finally death will occur.

## Maruthuvam (Treatment)

In *Siddha* system treatment is aimed at not only to cure the disease but also to prevent the diseases and improve the body condition this is explained as follows,

*Kappu* (prevention)

*Neekam* (Treatment)

*Niraivu* (Restoration of well being)

In *Siddha* system it is unequivocally stated that even during the time of conception. These defects creep into the fertilized embryo. The defects form the disease for the manifestation of certain constitutional diseases later on during the existence of the individual.

Some diseases for which no known cause is given are designated as diseases of idiopathic origin of hereditary disorders. In *Siddha* system these are described as *karma noigal*.



### ***Kaappu* (prevention)**

Prevention and cure are the basic aim of all systems of medicine where as *Siddha* system has in addition the transcended motivation of what might be called the immortality of the body. The basic emphasis of *Siddha* system is on positive health viz; to prevent diseases by careful dieting and proper relaxation of the mind to achieve a totality of health that assures not only longevity but also immortality.

## **Line of Treatment**

Line of treatment for *Raththa moolam* consists of,

1. Administration of internal medicine to stop bleeding, to reduce inflammation and to relieve constipation.
2. *Paththiyam*, i.e. diet restrictions to normalize the vitiated *vaatha piththa thontham* and to maintain a longer drug action.
3. *Yoga* therapy to normalize bowel habits and to normalize the vitiated *vaatha piththa thontham*.
4. *Pranayama* therapy to normalize *Mukkutram*.

### **Administration of medicines**

All the 50 patients were given the trial drug once in a week for four weeks and the prognosis was noted. The *Siddha* medicine *Naagaraathi elagam* was administered at a dosage of 2 tablets (each 2.1gm) with honey as adjuvant twice a day after food.

Admitted patients were treated in the In patient department for 10 to 28 days according to the severity of the disease and prognosis. Out patients were treated for a period of 28 days.

The prognosis was noted on the basis of complete arrest of bleeding relief from constipation, relief from irritation and soreness, relief from giddiness and head ache.

***Paththiyam or diet for Raththa moolam***

Diet for *Raththa moolam* should be one that reduces the deranged *vaatha piththa thontham*. *Anubava vaidhya deva ragasiyam* prescribes the following diet regime for *Raththa moolam*.

- Cow's butter milk
- Cow's butter
- Cow's ghee
- Pepper
- Asafoetida
- Rock salts
- Tender mango
- Castor oil

Fresh green such as,

- *Arai keerai*(*Amaranthus tristis*)
- *Siru keerai*(*Amaranthus gangeticus*)
- *Thuthulai keerai*(*Abutilon indicum*)
- *Venthaya keerai*(*Trigonella foenum graccum*)
- *Manathakkali keerai*(*Solanum nigrum*)
- *Mullang katthari*(*Solanum xanthocarpum*)

### ***Apathyam* or Diet restriction**

Since *Raththa moolam* is due to the derangement of *vaatha* and *piththa* humour, aggravating food with taste such as sour, acrid and activities that promote derangement of *vaatham* and *piththa* humour should be avoided.

Diet containing,

- Fish
- Meet
- Black gram
- *Ragi*
- Rye
- Bitter ground
- Indian corn or maize
- Oil cake of eluppai (*Madhuka indices*)
- Hot foods and drinks
- *Motchi* (*Dolichos tetraspermus*)
- Brinjal (*Solanum melangena*) and

Straining activities such as,

- Strenuous labour
- Prolonged sitting
- Swimming
- Excessive sexual intercourse
- Frequent riding on horses, camels, elephants.

After getting relief from the *Raththa moolam* the patients are advised to follow *Pranayama*, *yoga*, and some procedures that relieve mental stress (*Kanma neekam*).

### ***Pranayama therapy***

Patients are advised to follow *kapalabhati*. The technique is as follows. The posture is *padmasana*. First the abdominal muscles are relaxed and anus is contracted. Then suddenly the lower abdomen below navel is contracted. This is held for twenty seconds and then abdomen is relaxed. This process is repeated up to the level that one feels comfortable. There should be half a minute rest between each round. Three rounds are enough at a time in the beginning.

This *Pranayama* corrects the whole system and normalizes the affected *vaayus*. This helps in avoiding congestion and varices of lower rectal veins and promotes better circulation.

### ***Yoga therapy***

The following four *Asanas* are prescribed to prevent the recurrence of *Raththa moolam*.

#### ***Vibarita karanai***

It promotes better venous circulation and thereby prevents the recurrence of *Raththa moolam*.

#### ***Sarvangasanam***

It vitalizes all internal organs. It promotes better venous circulation and reduces rectal venous congestion

### ***Sirasasanam***

It vitalizes brain, reduces anxious states, promotes better venous circulation thereby prevents recurrence of *Raththa moolam*

### ***Mayurasanam***

This relieves constipation, regularizes bowel habits and thereby prevents recurrence of *Raththa moolam*.

### **Substances that cure ano-rectal diseases**

மருள்சா ரடைகருணை வச்ரவல்லி காட்டுக்  
கருணை புளிநரளை காறாக் -கருணை  
மெருகோடு வெள்ளருகு வெண்சித்ர மூலம்  
வருமூலம் போக்கும் மருந்து.

- *Pathartha guna chinthamani*

- *Marul* – *Sansevieria roxburghiana*
- *Saaradai* – *Trianthema decandra*
- *Karunai* – *Amorphophallus paeonifolius*
- *Vachravalli* – *Vitis quadrangularis*
- *Kaattukarunai* – *Tacca pinnatifida*
- *Puli naralai* – *Vitis lanata*
- *Kaarakarunai* – *Amorphophallus campanulatus*
- *Merugu* – *Hamelomena aromatica*
- *Vellarugu* – *Enicostemma axillare*
- *Venn chitra moolam* – *Plumbago zeylanica*.

## **Other medicines for Moola rogam**

Various siddha medicines (*Aga marunthugal* & *Pura marunthugal*) for *Moola rogam*, which are given by many of the Siddhars in various Siddha texts, are given below.

### ***Aga marunthugal* (Internal medicines)**

#### **1. *Kudineer***

*Athimathura kudineer*

*Ilavanga pattai kudineer*

*Murungai pattaiathi kashayam*

#### **2. *Karkam***

*Seenthil karkam*

#### **3. *Utkali***

*Siru vazhuthunaik kali*

#### **4. *Adai***

*Kavizh thumbai adai*

#### **5. *Chooranam***

*Elathi chooranam*

*Idi vallathy chooranam*

*Naayuruvi chooranam*

*Koppirandai chooranam*

*Kadukkai chooranam*

*Kodiveli chooranam*

*Karanai chooranam*

## **6. Pittu**

*Kaattu karunai kizhangu pittu*

## **7. Vadagam**

*Karunai kizhangu vadagam*

*Maani pathra vadagam*

*Kaattu karunai vadaga*

## **8. Manappagu**

*Atthi pazha manappagu*

## **9. Nei**

*Thiri kadugu nei*

*Moolakudara nei*

*Chennayuruvi nei*

*Naayuruvi nei*

## **10. Rasayanam**

*Aja maamsa rasayanam*

## **11. Elagam**

*Natthai ilagam*

*Karunai ilagam*

*Aamai ilagam*

*Pallathagi ilagam*

## **12. Ennai**

*Pazhanthinni vavval ennai*

*Azhrchi ennai*

*Pirai ennai*

### **13. Maaththirai**

*Vellai saaranai urundai*

*Kangayan kuligai*

### **14. Kadugu**

*Karunkozhi kadugu*

*Nochi kadugu*

### **15. Chendhooram**

*Suyamakkini kumari chendhooram*

*Thuththanaga chendhooram*

*Velleeya chendhooram*

*Kaareeya chendhooram*

### **16. Parpam**

*Thuththanaga parpam*

*Velleeya parpam*

*Kaareeya parpam*

*Miruthar singi parpam*

*Aamaiodu parpam*

### **17. Chunnam**

*Thiruvanga chunnam*

*Thiruvanga pavala chunnam*

*Naaga chunnam*



***Pura marunthugal* (External medicines)**

**1. *Poochu***

*Sukkathi poochu marunthu*

**2. *Vethu***

*Karunchembai vethu*

*Yettiylai vedhu*

**3. *Pukhai***

*Aatteru pukhai*

*Vanniyilai pukhai*

**4. *Kazhuvu neer***

*Thiri pala kudineer*

## **MODERN ASPECT**

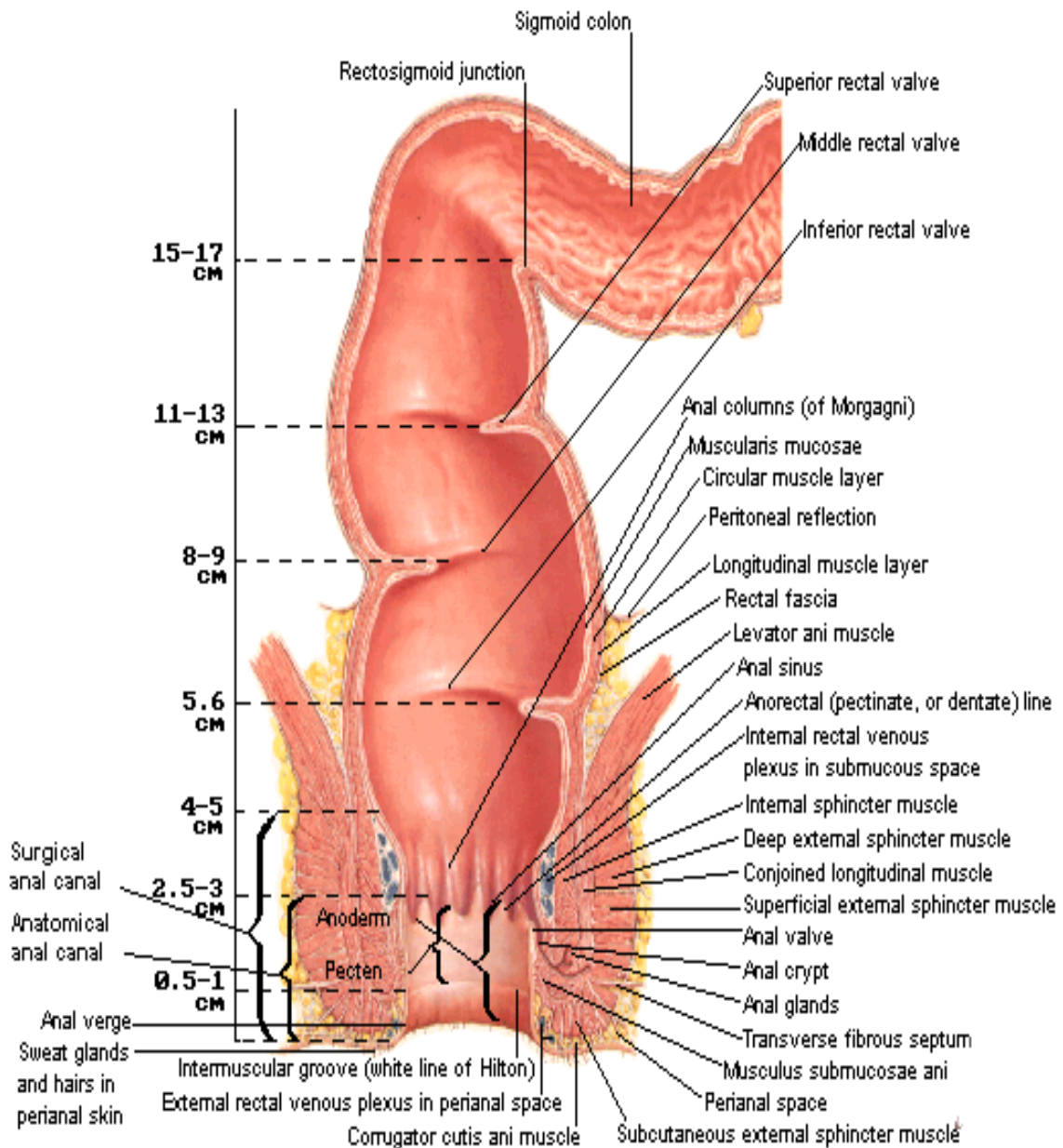
### **THE RECTUM**

#### **Anatomy**

The Rectum is a curved segment of the bowel, approximately 12cm long, lying in the concavity of the mid and lower sacrum. The upper -two thirds of the anterior rectum but not the posterior surface is covered by peritoneum. The rectum has an ill defined anatomical beginning, but surgically the recto sigmoid junction lies opposite the sacral promontory. The rectum is continuous with the sigmoid colon at the level of the third sacral vertebra and terminates at the upper end of the anal canal. At this point, the puborectalis muscle encircles the posterior and lateral aspects of the junction, creating the anorectal angle (normally  $120^{\circ}$ ). The rectum is approximately 12- 25 cm long. In the upper part, it has the same diameter (4cm) as that of the sigmoid colon, but in the lower part it is dilated to form the rectal ampulla.

The rectum has three lateral curvatures: the upper and lower are convex to the right, and the middle convex to the left. On the mucosal(lumen)aspect, these three curves are marked by semi circular folds(Houston's valves). That part of the rectum that lies below the middle valve has a much wider diameter than the upper third and is known as the ampulla of the rectum.

# Rectum and Anal Canal



## Relations of the rectum

	Male	Female
Anterior	Bladder Seminal vesicle Ureters Prostate Urethra	Pouch of Douglas Uterus Cervix Posterior vaginal wall
Lateral	Lateral ligaments Middle rectal arteries Obturator internus muscle Side wall of pelvis Levator ani muscle	Lateral ligaments Middle rectal arteries Obturator internus muscle Side wall of pelvis Levator ani muscle
Posterior	Sacrum and coccyx Loose areolar tissue Fascial condensation Superior rectal artery Lymphatics	Sacrum and coccyx Loose areolar tissue Fascial condensation Superior rectal artery Lymphatics

## Blood supply

1. The superior rectal artery is the direct continuation of the inferior mesenteric artery and is the main arterial supply of the rectum.
2. The middle rectal artery arises on each side from the internal iliac artery and provides an arterial supply to the muscle of the mid and lower rectum.
3. The inferior rectal arteries are terminal branches of the internal pudendal arteries. They supply the internal and external sphincters, the anal canal below its valves, and the perianal skin.

**Venous drainage**

The superior haemorrhoidal veins draining the upper half of the anal canal above the dentate line pass upwards to become the rectal veins: these unite to form the superior rectal vein, which later becomes the inferior mesenteric vein.

**Lymphatic drainage**

Lymphatic draining the rectum and the upper anal canal above the level of the dentate line pass superiorly, initially through the rectal wall, and then as a fine net work over the surface of the rectum. The Para rectal nodes lie within the mesorectum, a variable distance from the rectal wall. The overall direction of drainage is upwards along the branches of the superior rectal artery.

**Innervation**

The rectum is innervated primarily via the inferior mesenteric plexus. Both sympathetic and Para sympathetic fibers form a plexus along branches of the superior rectal artery. A small contribution is also made by fibers of the middle rectal plexus along the branches of the middle rectal artery. These are derived from the inferior hypo gastric plexus.

# **ANAL CANAL**

## **Anatomy**

The anal canal commences at the level where the rectum passes through the pelvic diaphragm and ends at the anal verge and is approximately 5cm in length. The muscular junction between the rectum and anal canal can be felt with the finger as a thickened ridge-the anorectal 'bundle' or 'ring'. The anal canal consists of an inner epithelial lining, a vascular sub epithelium, the internal and external anal sphincters and fibro muscular supporting tissue.

### **Anal canal musculature**

1. The internal sphincter
2. The longitudinal muscle
3. The external sphincter
4. The puborectalis

### **The ano rectal ring**

The ano rectal ring marks the junction between the rectum and the anal canal. It is formed by the joining of the pubo rectalis muscle, the deep external sphincter, conjoined longitudinal muscle and the highest part of the internal sphincter. The ano rectal ring can be clearly felt digitally, especially on its posterior and lateral aspects.

### **The Dentate Line**

The dentate line is a most important land mark both morphologically and surgically. It represents the site of fusion of the proctodaeum and post – allantoic gut, and the position of the anal membrane, remnants of which may frequently be seen as anal papillae situated on the free margin of the anal valves.

## **Arterial supply**

The anal canal is supplied by branches from the superior, middle and inferior haemorrhoidal arteries. The most important is the superior haemorrhoidal, whose left branch supplies the left half of the canal by a single terminal branch, while its right has two terminal branches.

## **Venous drainage**

The superior and middle haemorrhoidal veins drain via the inferior mesenteric vein into the portal system, having become the superior rectal vein en route. The superior haemorrhoidal vein drains the upper half of the anal canal. The inferior haemorrhoidal veins drain the lower half of the anal canal and the subcutaneous perianal plexus of veins: they eventually join the external iliac vein on each side.

## **Lymphatic drainage**

Lymph from the upper half of the anal canal flows upwards to drain into the post rectal lymph nodes and from there goes to the Para- aortic nodes via the inferior mesenteric chain. Lymph from the lower half of the anal canal drains on each side first into the superficial and then into the deep inguinal group of lymph glands.

## **Gastro intestinal autonomic reflexes**

The uppermost part of the GIT and the rectum are controlled principally by autonomic reflexes. For instance, the smell of appetizing food or the presence of food in

the mouth initiates signals from the nose and mouth to the vagal, glossopharyngeal and salivatory nuclei of the brain stem. These in turn transmit signals through the Parasympathetic nerves to the secretory glands of the mouth and stomach, causing secretion of digestive juices sometimes even before food enters the mouth.

When fecal matter fills the rectum at the lower end of alimentary canal, sensory impulses initiated by stretching the rectum are sent to the sacral portion of the spinal cord, and a reflex signal is transmitted back through the sacral parasympathetic to the distal parts of the colon; these result in strong peristaltic contractions that cause defaecation.



## HAEMORRHOIDS

“The common people call them piles,  
The aristocracy calls them haemorrhoids,  
The French call them figs –  
What does it matter so long as you can cure them?”

-John of arderne, 1370.

Ano rectal disorders may cause significant morbidity, primarily as a result of pain. As with the general population, haemorrhoidal disease is the most common ano rectal disorder.

**Haemorrhoids** (Greek: haima=blood, rhoos= flowing; synonym: piles (Latin pila=a ball) are dilated veins occurring in relation to the anus. Such haemorrhoids may be external or internal, i.e. external or internal to the anal orifice. The external variety is covered by skin, while the internal variety lies beneath the anal mucous membrane. When the two varieties are associated, they are known as intero external haemorrhoids.

The veins that form internal haemorrhoids become engorged as the anal lining descends and is gripped by the anal sphincters. The mucosal lining is gathered prominently in three places (the anal cushion), which can be in the areas of the three terminal branches of the superior haemorrhoidal artery, but this is exceptional (Thomson)

The anal cushions are present in embryonic life and are necessary for full continence. Straining causes these cushions to slide downwards and internal haemorrhoids develop in the prolapsing tissues.

Haemorrhoids may be symptomatic of some other condition, and this important fact must be remembered. Symptomatic haemorrhoids may appear:

In carcinoma of rectum: This, by compressing or causing thrombosis of the superior rectal vein, gives rise to haemorrhoids sufficiently often to warrant examination of the rectum and the recto sigmoid junction for a neoplasm in every case of haemorrhoids.

During pregnancy: Pregnancy piles are due to compressing of the superior rectal veins by the pregnant uterus and the relaxing effect of progesterone on the smooth muscle in the walls of the veins, plus an increased pelvic circulating volume.

From straining at micturation: Consequent upon a stricture of the urethra-or an enlarged prostate.

Occasionally, patients with portal hypertension develop rectal varices, and these should not be confused with haemorrhoids.

### **Histology**

Histologically, haemorrhoids consist of dilated veins in the mucosa and sub mucosa. There may be evidence of thrombosis or hemosiderin deposition from a previous episode of bleeding.

Depending on whether the haemorrhoids arise above or below the dentate line, they may be covered by columnar, transitional or non keratinizing squamous mucosa.

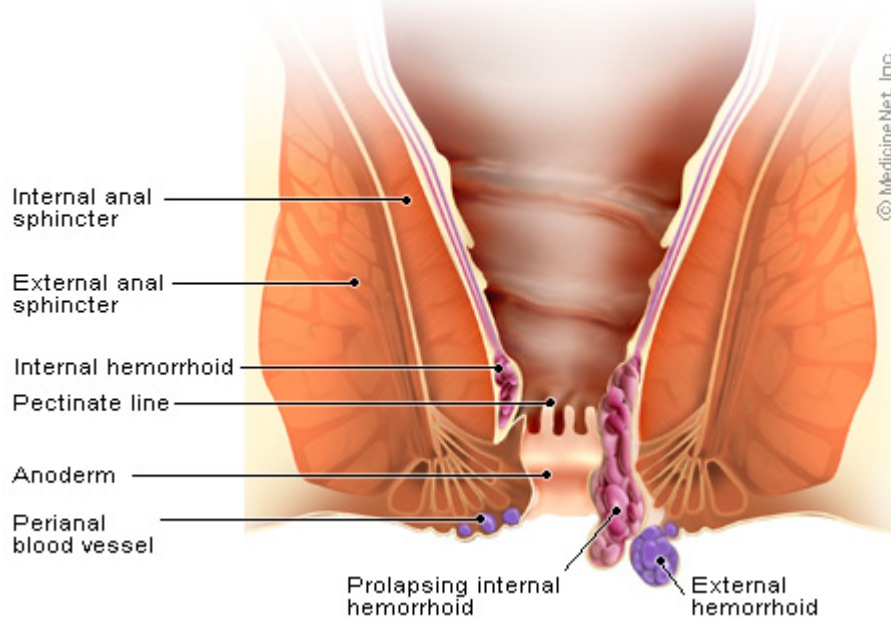
## **Morphology**

The varicosities may develop in the inferior haemorrhoidal plexus and thus are located below the ano rectal line (external hemorrhoids). Alternatively, they may develop from dilatation of the superior haemorrhoidal plexus and produce internal haemorrhoids. Commonly, both plexus are affected, and the varicosities are referred to as combined haemorrhoids. Histologically, these lesions consist only of thin-walled, dilated, sub mucosal varices that produce beneath the anal or rectal mucosa. In their exposed, traumatized position, they tend become thrombosed and, in the course of time, recanalized. Superficial ulceration, fissure formations and infarction with strangulation may develop.

## **Internal haemorrhoids**

Internal haemorrhoids, which include interoexternal haemorrhoids, are exceedingly common. Essentially, the condition is a dilatation of the internal venous plexus with an enlarged displaced anal cushion. Because of the communication between the internal and external plexuses, if the former becomes engorged, the later is liable to become involved also. Internal haemorrhoids typically occur in the left lateral, right anterior and right posterior segments of the upper anal canal.

## Formation of hemorrhoids



### Three degrees of internal haemorrhoids

Internal haemorrhoids are classified according to their degree of prolapse. This can best be distinguished with the patients straining and on anoscopy.

#### First degree haemorrhoids

Haemorrhoids are those in which hypertrophy of the internal haemorrhoidal plexus remain entirely within the anal canal as the mucosal suspensory ligaments remain intact. Patients in this stage usually present with rectal bleeding and discomfort or irritation. Bleeding is bright red and occurs during defaecation as splash in the pan. It may continue for months or years.

## **Second degree**

Piles will descend so that they prolapse during defaecation but spontaneous reduction takes place afterwards. There may be small skin tag, some mucous discharge, soreness and irritation.

## **Third degree**

In third degree haemorrhoids, they remain prolapsed after defaecation and require manual replacement. The mucous underlying such haemorrhoids undergoes squamous metaplasia.

## **Aetiology**

### **1. Hereditary**

The condition is so frequently seen in members of the same family that there must be a predisposing factor, such as a congenital weakness of the vein walls or an abnormally large arterial supply to the rectal plexus. Varicose veins of the legs and haemorrhoids often occur concurrently.

### **2. Morphological**

In quadrupeds, gravity aids, or at any rate does not retard, return of venous blood from the rectum. Consequently, venous valves are not required. In humans, the weight of the column of blood unassisted by valves produces a high venous pressure in the lower rectum. Unparalleled in the body. Except in a few fat old dogs, haemorrhoids are exceedingly rare in animals.

### 3. Anatomical

The collecting radicles of the superior haemorrhoidal vein lie unsupported in the very loose sub mucous connective tissue of the ano rectum. These veins pass through muscular tissue and are liable to be constricted by its contraction during defaecation. The superior rectal veins, being tributaries of the portal vein, have no valves.

### 4. Exacerbating factors

Straining accompanying constipation or that induced by over purgation is considered to be a potent cause of haemorrhoids. Less often, the diarrhoea of enteritis, colitis or the dysenteries aggravates latent haemorrhoids. In both instances, descent and swelling of the anal cushions are prominent features.

### 5. Pathology

Internal haemorrhoids are frequently arranged in three groups at 3, 7 and 11 o' clock with the patient in the lithotomy position. This distribution has been ascribed to the venous drainage of the anus, where by there are two subdivisions of the right branch remains single, but this is now known to be atypical. In between these three primary haemorrhoids here may be smaller secondary haemorrhoids. Each principal haemorrhoid can be divided into three parts.

1. The pedicle is situated at the ano rectal ring. As seen through a proctoscope, it is covered with pale –pink mucosa. Occasionally, a pulsating artery can be felt in this situation.
2. The internal haemorrhoid commences just below the ano rectal ring. It is bright – red or purple, and covered by mucous membrane. It is of variable size.

3. An external associated haemorrhoid lies between the dentate line and the anal margin. It is covered by skin, through which blue veins can be seen; unless fibrosis has occurred. This associated haemorrhoid is present only in well-established cases.

Entering the pedicle of an internal haemorrhoid may be a branch of the superior rectal artery. Very occasionally, there is a haemangiomatous condition of this artery-an 'arterial pile' which leads to ferocious bleeding at operations.

### **Clinical features**

#### **1. Bleeding**

Bleeding, as the name haemorrhoid implies, is the principal and earliest symptoms. At first the bleeding is slight; it is bright red and occur during defaecation (a 'splash in the pan'), and it may continue intermittently thus for months or years. Haemorrhoids that bleed but do not prolapse outside the anal canal are called first degree haemorrhoids.

#### **2. Prolapse**

Prolapse is a much later symptom. In the beginning, the protrusion is slight and occur only at stool, and reduction is spontaneous. As time goes on, the haemorrhoids do not reduce themselves but have to be replaced digitally by the patient. Haemorrhoids that prolapse on defaecation but return or need to be replaced manually and then stay reduced are called second degree haemorrhoids. Still later, prolapse occurs during the day, apart from defaecation, often when patients are tired or exert themselves.

Haemorrhoids that are permanently prolapsed are called third-degree haemorrhoids. By now, the haemorrhoids have become a source of great discomfort and cause a feeling of heaviness in the rectum but are not usually acutely painful.

### 3. Discharge

A mucoid discharge is a frequent accompaniment of prolapsed haemorrhoids. It is composed of mucous from the engorged mucous membrane. Sometimes augmented by leakage of ingested liquid paraffin.

### 4. Pruritus

Pruritus will almost certainly follow this discharge.

### 5. Pain

Pain is absent unless complications supervene. For this reason, any patient complaining of 'painful piles' must be suspected of another condition (possibly serious) and examined accordingly.

### 6. Anaemia

Anaemia can be caused very rarely by persistent profuse bleeding from haemorrhoids.



## **Investigations**

### **Rectal examination**

Rectal examination should not be unduly painful and it is important to explain this to the patient, along with your reasons for performing it. The examination will promote a feeling of rectal fullness and it may stimulate a desire to evacuate. Tell the patient to expect this. Always work with an assistant and always glove both hands.

### **Position of the patient**

1. The left lateral position (Sims). - This is the most popular position for ano rectal examination. The patient lies on the left –side. The buttocks should project over the edge of the table. Both the hips and knees are well flexed so that the knees are taken near to the chest of the patient. This position is suitable for inspection of the peri anal region and proctoscopy.

2. Dorsal position. - The patient lies on his back with the hips flexed. The examiner passes his forearm beneath the right thigh and the index finger is pushed through the anal canal. This position is popular when the patient is too ill to alter the position. It is also convenient to do bimanual examination in this position. The right index finger remains in the rectum while the left hand on the abdomen to know the interior of the pelvis in better way – the size and characteristics of a pelvic swelling and more information regarding rect-vesical or recto- uterine pouch.

3. The knee elbow position.-This position is particularly suitable for palpating the prostate and seminal vesicles.

4. Right lateral position. - can be chosen in the case of carcinoma at the pelvi rectal junction when it tends to fall downwards and towards the anus for better palpation by the examining finger.

5. Lithotomy position.-The advantages of this position are that more information regarding pelvic viscera can be obtained and lesion high in the rectum is more likely to be felt.

The anal region must be inspected firstly, palpated secondly and digital examination lastly.

### **Inspection**

On inspection there may be no evidence of internal haemorrhoids. In more advanced cases, redundant folds or tags of skin can be seen in the position of one or more of the three primary haemorrhoids. When the patient strains, internal haemorrhoids may come into view transiently or, if they are of the third degree, they are, and remain, prolapsed.

Inspection of the natal cleft and anal verge may reveal skin tags, pilonidal sinuses, warts, fissures, fistulas, external haemorrhoids or prolapsed rectal mucosa. A bluish discolouration of the perineal skin suggests crohn's disease.

The anal skin is innervated with pain fibers and anal pain and tenderness are suggestive of infection (e.g. Peri anal abscess), fissure and fistula in ano or thrombosis of an external haemorrhoid.

### **Palpation**

On rectal palpation you may feel an intrinsic tumour caused by a carcinoma or polyp Perirectal sepsis causes marked rectal wall tenderness and an abscess may be felt pointing into the lumen. The anterior rectal peritoneal reflection straddles both the anterior rectum itself and the structure lying in front of it. Consequently, malignant or inflammatory lesions of peritoneum may be felt through the anterior wall of the rectum.

### **Digital examination**

Internal haemorrhoids can not be felt unless they are thrombosed.

### **Special investigations**

#### **1. Proctoscopy**

Proctoscopy is performed in all patients with a history of bright red blood per rectum.

1. The proctoscope is passed into the anus directed towards the symphysis pubis and the obturator is removed.
2. The patient strains down as the proctoscope is removed.
3. Haemorrhoids are seen as purplish veins in the left lateral, right posterior or right anterior positions.

## **2. Sigmoidoscopy**

Sigmoidoscopy is mainly used to detect presence of any growth, ulcer, diverticula etc. in the rectum and lower part of the sigmoid colon. Sigmoidoscopy should be performed as a precaution in every case. Haemorrhoidal and low recta bleeding should be excluded by sigmoidoscopy in patients thought to have lower gastro intestinal haemorrhage.

## **3. Colonoscopy**

With the advent of fiberoptic colonoscope, the whole of the colon up to the caecum and lower 6 inches of small intestine can be viewed.

***Indications for colonoscopy are:***

### **A. Diagnostic:**

1. Lower GI bleeding
2. Colonic and iliocaecal tuberculosis
3. Inflammatory bowel disease and malignancy
4. Evaluation of equivocal barium enema findings.

### **B. Therapeutic:**

- i. Polypectomy, foreign body removal and control of bleeding by electrocaagulation.
- ii. In western countries where angiomatous malformation is a major cause of lower GI haemorrhage colonoscopic electro coagulation is very essential and successful.

#### 4. Barium enema x-ray

In any case of internal haemorrhoid Barium enema x-ray must be performed to exclude any carcinoma above the rectum to be the cause of this condition.

#### Internal Haemorrhoids: Grading and Managements

Grade	Symptoms& Signs	Management
1 <sup>st</sup> degree	Bleeding; no prolapse	Dietary modification, rubber band ligation, coagulation.
2 <sup>nd</sup> degree	Prolapse with spontaneous reduction, bleeding.	Dietary modification, rubber band ligation, coagulation.
3 <sup>rd</sup> degree	Prolapse requiring digital reduction, bleeding.	Dietary modification, rubber band ligation, coagulation, surgical haemorrhoidectomy.
4 <sup>th</sup> degree	Prolapsed, cannot be reduced, and strangulated.	Urgent haemorrhoidectomy

## **Differential Diagnosis**

### **1. Thrombosed external haemorrhoids (peri anal haematoma)**

The condition appears suddenly and is very painful, and on examination a tense, tender swelling that resembles a semi ripe black current is seen. The haematoma is usually situated in a lateral region of the anal margin. Untreated, it may resolve, suppurate, fibrose and give rise to a cutaneous tag, or burst and extrude the clot, or continue bleeding.

### **2. Fissure-in-ano**

This is a longitudinal ulcer in the anal canal with surrounding edema and inflammatory induration. Bright streak of blood with the passage of stool and pain after defaecation are the characteristic features. It is always associated with spasm of the anal sphincters.

### **3. Colon cancer**

Patients may have weight loss and a palpable mass, either on abdominal or rectal examination. Painless occult or overt rectal bleeding is the most common presentation.

## Colorectal Cancer Screening Recommendations

<b>Risk category</b>	<b>Recommendation*</b>	<b>Age to begin</b>	<b>Interval</b>
<i>Average risk</i>			
All patients age 50 and over not in the categories below	FOBT plus flexible sigmoidoscopy	50	FOBT every year and flexible sigmoidoscopy every 5 years
	<i>or</i>		
	TCE§	50	Colonoscopy every 5 to 10 years or DCBE every 5 to 10 years
<i>Moderate risk</i>			
Patients with single, small (<1 cm) adenomatous polyps	Colonoscopy	At time of initial polyp diagnosis	Colonoscopy within 3 years after initial polyp removal; if normal, as per average risk recommendations above
Patients with one large (≥1 cm) adenomatous polyp or multiple adenomatous polyps of any size	Colonoscopy	At time of initial polyp diagnosis	Colonoscopy within 3 years after initial polyp removal; if normal, colonoscopy every 5 years
Personal history of curative-intent resection of colorectal cancer	Colonoscopy	Within 1 year after resection	If normal, colonoscopy in 3 years; if still normal, colonoscopy every 5 years
Colorectal cancer or adenomatous polyp in first-degree relative before age 60	Colonoscopy	40 (or 10 years before the youngest case in the family, whichever is earlier)	Every 5 years
Colorectal cancer or adenomatous polyps in two or more first degree relatives of any age	Colonoscopy	40 (or 10 years before the youngest case in the family, whichever is earlier)	Every 5 years

Colorectal cancer in any other relatives (not included above)	As per average risk recommendations above; may consider beginning screening before age 50	--	--
<i>High risk</i>			
Family history of familial adenomatous polyposis	Early surveillance with endoscopy, counseling to consider genetic testing and referral to a specialty center	Puberty	If familial polyposis is confirmed, consider colectomy; otherwise, endoscopy every 1 to 2 years
Family history of hereditary nonpolyposis colon cancer	Colonoscopy and counseling to consider genetic testing	21	Every 2 years until age 40, then every year
Inflammatory bowel disease¶	Colonoscopy with biopsies for dysplasia	8 years after the start of colitis	Every 1 to 2 years

FOBT = fecal occult blood testing; TCE = total colon examination; DCBE = double-contrast barium enema.

\*--Digital rectal examination should be done at the same time as sigmoidoscopy or colonoscopy.

§--TCE includes either colonoscopy or DCBE. The choice of procedure should depend on the medical status of the patient and the relative quality of the medical examinations available in a specific community.

¶--The available scientific evidence is much stronger for ulcerative colitis than it is for other forms of inflammatory bowel disease such as Crohn's disease.



#### **4. Rectal varices**

In response to portal hypertension, varices can develop in the rectal mucosa between the superior haemorrhoidal veins (portal circulation) and the middle and inferior haemorrhoidal veins (systemic circulation). With anoscopy or sigmoidoscopy, rectal varices are seen as vascular structures located several centimeters above the dentate line. About 60% of patients with a history of bleeding esophageal varices have rectal varices.

#### **5. Fistula-in-ano**

This is a track lined by granulation tissue which opens deeply in the anal canal or rectum and superficially on the skin around the anus. A history of intermittent swelling with pain, discomfort and discharge in the perianal region can often be obtained.

#### **6. Rectal Prolapse**

This condition is seen in children between 1 to 3 years and in the elderly after 40 years of age. The main complaint is that something is coming per rectum during defaecation. The prolapse may reduce spontaneously or require digital reduction.

#### **Complications**

Profuse haemorrhage is not rare. Most often, it occurs in the early stages of the second degree. The bleeding occurs mainly externally, but it may continue internally after the bleeding haemorrhoid has retracted or has been returned. In these circumstances, the rectum is found to contain blood.

## **1. Strangulation**

One or more of the internal haemorrhoids prolapse and become gripped by the external sphincter. Further congestion follows because the venous return is impeded. Second-degree haemorrhoids are most often complicated in this way.

Strangulation is accompanied by considerable pain. Unless the internal haemorrhoids can be reduced within 1 or 2 hours strangulation is followed by thrombosis.

## **2. Thrombosis**

The affected haemorrhoid or haemorrhoids become dark purple or black and feel solid. Considerable oedema of the anal margin accompanies thrombosis. Once the thrombosis has occurred, the pain of strangulation largely passes off, but tenderness persists. Superficial ulceration of the exposed mucous membrane often accompanies strangulation with thrombosis.

## **3. Gangrene**

Gangrene occurs when strangulation is sufficiently tight to constrict the arterial supply of the haemorrhoid. Very occasionally; massive gangrene extends to the mucous membrane within the anal canal and rectum.

## **4. Fibrosis**

After thrombosis, internal haemorrhoids sometimes become converted into fibrous tissue. The fibrosed haemorrhoids is at first sessile, but by repeated traction during prolapse at defaecation, it becomes pedunculated and constitutes a fibrous polyp that is readily distinguished by its white colour from an adenoma, which is bright red.

## **5. Suppuration**

It is uncommon. It occurs as a result of infection of a thrombosed haemorrhoid. Throbbing pain is followed by perianal swelling, and a perianal or sub mucous abscess results.

## **6. Pyle phlebitis (portal pyaemia)**

Theoretically, infected haemorrhoids should be a potent cause of portal pyaemia and liver abscess.

## **Therapeutic considerations**

### **Nutrition**

#### ***1. Diet***

A high-fiber diet is perhaps the most important component in the prevention of hemorrhoids diet rich in vegetables, fruits, legumes, and grains promotes peristalsis; and many fiber components attract water and form a gelatinous mass which keeps the feces soft, bulky, and easy to pass. The diet should contain liberal amounts of proanthocyanidin and anthocyanidin rich foods, such as blackberries, cherries, blueberries, etc. to strengthen vein structures.

### **Supplements**

- VitaminA: 10,000 IU / day
- Vitamin B-complex: 10-100mg / day
- Vitamin C: 500-3,000mg / day
- Vitamin E: 200-600 IU /day
- Bioflavonoids: 100-1,000mg / day
- Zinc: 15-30mg /day

### **3. Flavanoids**

Flavanoid preparations have been shown to be beneficial in the prevention and treatment of haemorrhoids due to their strengthening effect on venous tissues.

### ***2. Fiber supplements***

Natural bulking compounds can be used to reduce fecal straining. These fibrous substances, particularly psyllium seed possess mild laxative action due to their ability to attract water and form a gelatinous mass. The diet with bulk forming fibers can significantly reduce the symptoms of haemorrhoids (bleeding, pain, pruritus, and prolapse) and improve bowel habits.



### Sources of Dietary Fiber

Sources of Fiber	Serving	Gm/serving
<b><i>Vegetables &amp; Beans</i></b>		
Green beans	½ cup	2
Kidney beans	½ cup	5
Broccoli	½ cup	2.5
Brussel sprouts	½ cup	3.5
Carrots	½ cup	2.5
Corn	½ cup	3.0
Green peas	½ cup	3.5
Lettuce	½ cup	0.5
Potato (with skin)	½ cup	2.0
<b><i>Fruits</i></b>		
Apple	medium	2.5
Banana	1	2.0
Blackberries	1 cup	2.0
Cantaloupe	1 wedge	1.0
Dry Figs	3.5 ounces	18
Grape fruit	medium	3.5

Grapes	1 cup	1
Orange	1 medium	3
Pear	1 medium	4.5
Prunes	1 cup	13.5
Raspberries	1 cup	6.0
Strawberries	1 cup	3.5
<b><i>Grain Products</i></b>		
Bread, white	1 slice	0.5
Bread, whole wheat	1 slice	2.0
Cereal, oat bran	1 ounce	4
Shredded wheat	1 ounce	2.5
Rice, brown	½ cup	5
Rice, white	½ cup	1.5

The goal is 30-35 gm of fiber per day

## **Topical therapy**

Topical therapy, in most circumstances, will only provide temporary relief.

Topical treatments involve the use of suppositories, ointments and anal rectal pads. Many over-the-counter products for haemorrhoids contain primarily natural ingredients, such as,

- Shark liver oil
- Cod liver oil
- Cocoa butter
- Zinc oxide
- Allantoin

## **Botanical medicines**

- Centella asiatica
- Acacia catechu
- Terminalia chebula
- Cynodon dactylon
- Zingiber officinale

## **Hydrotherapy**

The warm Sitz bath is an effective non-invasive treatment for uncomplicated haemorrhoids.



## **Surgical treatment**

Surgical methods of treating haemorrhoids include:

### **1. The injection of sclerosing agents**

Injection treatment (Mitchell)

Sclerosant or hardening agent is injected into hemorrhoids. This causes the vein walls to collapse and the hemorrhoids to shrivel up.

Indications:

- This is ideal for first- degree internal haemorrhoids which bleed.
- Early second- degree haemorrhoids are often cured by this method but a proportion relapses.

### **2. Rubber band ligation**

sometimes called Baron ligation. Elastic bands are applied onto an internal hemorrhoid to cut off its blood supply. Within several days, the withered hemorrhoid is sloughed off during normal bowel movement.

For second degree haemorrhoids which are too large for successful handling by injection, treatment is available by slipping tight elastic bands on to the base of the pedicle of each haemorrhoid with a special instrument.

Complications:

1. Acute pain.
2. Difficult to remove a band.
3. Cause some bleeding.
4. Feeling of congestion

### **3. Cryosurgery**

The application of liquid nitrogen has been evaluated in some centers. The external cold (- 196 c) of the application causes coagulation, necrosis of the piles, which subsequently separate and drop off. A frozen tip of a cryoprobe is used to destroy hemorrhoidal tissues. Rarely used anymore because of side effects.

Complications:

1. Mucous discharge.
2. Pain.

### **4. Infra red photo coagulation**

The application of infra red coagulation by a specially designed instrument has recently been advocated for the treatment of haemorrhoids that do not prolapse (Leicester). This is said to be an effective and painless method of treatment.

Indications:

1. Bleeding per rectum.
2. Mucoïd discharge.
3. Pruritus.
4. All internal haemorrhoids especially grade I, II, and III.
5. Excellent adjunct to surgical haemorrhoidectomy.
6. Good Hemostasis for surgically removed haemorrhoids.
7. To coagulate external thrombotic haemorrhoids that has been removed.

### **5. Laser ablation**

By using lasers, laser energy is passed over haemorrhoidal masses. The haemorrhoids shrink and is ablated.

## **6. Haemorrhoidectomy**

A true surgical procedure to excise and remove hemorrhoids. Has possible correlation with incontinence issues later in life; in addition, many patients complain that pain during recovery is severe. For this reason is often now recommended only for severe (grade IV) hemorrhoids.

## **7. Monopolar direct current therapy**

## **8. The dilatation of the anal canal and lower rectum**

### **Post operative complications**

Early:

1. Pain.
2. Acute retention of urine.
3. Reactionary haemorrhage.

Late:

1. Secondary haemorrhage.
2. Anal stricture.
3. Anal fissure.

**Patient Information:**  
**Relief of Hemorrhoidal Discomfort**

1. Prevent or correct constipation. Eat plenty of high-fiber foods including bran, fresh fruits and vegetables.
2. Drink plenty of water and other fluids. Also, psyllium-containing products and stool softeners may be helpful. Include exercise in your daily routine.
1. Avoid straining during defecation or sitting on the toilet for a prolonged period of time.
2. If hemorrhoids extend outside the anal canal, ice compresses may ease the swelling.
3. Sitting in warm water for approximately 15 minutes at a time may ease the symptoms. Adding Epsom salt to the water helps relieve the inflammation. Sitz baths taken several times a day will also provide a soothing effect.
4. Prior to administering any medication, the anal area should be cleansed gently with warm water by dabbing—not wiping—the area. Avoid scented and colored tissue. The use of moistened cleansing tissues is recommended.
5. Do not sit for prolong periods of time. Take short walks or stand and stretch periodically.
6. Avoid any activities that require heavy lifting of objects.
7. Avoid foods and drinks that may make hemorrhoids worse, including spicy food, nuts, coffee and alcohol.
8. Contact your physician if your symptoms do not improve after seven days of self-treatment. Also, notify your physician promptly if bleeding, seepage or severe pain occurs.
9. Do not use over-the-counter products that contain a vasoconstrictor (e.g., ephedrine, epinephrine, phenylephrine HCl) if you have any of the following: cardiovascular disease, hypertension, diabetes, difficulty in urination, or if you are taking an antidepressant medication.

## MATERIALS AND METHODS

### I.BACKGROUND

*Raththa moolam* (Bleeding piles) is caused by dilated varicose veins. Initially they are located just inside the anus. Bleeding piles may be present for many years but remain undetected until symptoms appear. It can cause anal bleeding and itching and also pain and discomfort. Bleeding piles can affect people of any age but is most common in adults and particularly in pregnant women. It is almost never life-threatening.

According to the literature *Yugi Vaidhya Chinthamani*, *Raththa Moolam* has been mentioned as,

“சேதியாய் தொப்புள்தன்னில் வலித்து நொந்து  
சிறுகதிர்போற் பீறிட்டு ரத்தம் வீழும்  
மேதியாய் மேனிவற்றி வெளுத்துப் போகும்  
மிக்க கைகாலசந்துமே சோகையாகும்  
மாதியாய் மார்பிளக்குந் தலைநோவுண்டாம்  
மயக்கந்தான் மிகுதியாய்த் தள்ளிப் போடும்  
நாதியாய்க் கண்ணிரண்டு மஞ்சள் போலாம்  
நலியும் ரத்த மூலத்தின் பண்பு தானே”.

-பாடல் எண்-650

பொருள்

தொப்புளில் வலித்து வெளிக்குப் போம்போதெல்லாம் குருதி பீச்சுக் குழலிலிருந்து பீச்சுவது போல பீறிட்டுப் பாயும். மிகுதியும் குருதி வெளியாதலால் உடலின் குருதி குறைந்து உடல்வெளுத்து வன்மையிழந்து கைகாலோய்ச்சல் மயக்கம் மார்புநோய் தலைநோய் கண்மஞ்சளித்தல் முதலியன உண்டாகும்.

It means pain around the umbilicus, bleeds like splash in the pan before passing stools. Pallor, weakness of the limbs, loss of energy, giddiness and palpitation is present due to decrease in the total volume of blood. Headache, yellowish discolourations of the eyes are present.

In Siddha system there is a specific drug namely *NAAGARAATHI ELAGAM* [*Anupoga vaidhya navaneetham, part 8; page no: 4*] for this condition. It is proposed to estimate the efficacy of this drug in the treatment of bleeding piles.

## **II. AIMS**

### **a. Primary aim**

To estimate the efficacy of *Naagaraathi Elagam* in the treatment of *Raththa moolam*.

### **b. Secondary aim**

To find out the side effects or adverse reactions of the drug, if any.

## **III. POPULATION AND SAMPLE**

The population consists of all patients with bleeding piles. The sample consists of bleeding piles patients attending the IP/ OP Departments of the National Institute of Siddha, Chennai-47.

## **IV. SAMPLE SIZE**

The trial size will be 50 patients.

#### **V .a. INCLUSION CRITERIA**

1. Patients who are having classical symptoms of bleeding piles (1<sup>st</sup> degree internal haemorrhoids)
2. Aged 20 to 60 years.
3. Willing to give blood specimen for the investigation when required.
4. Willing to be admitted in the Hospital or willing to attend the OPD once a week for 4 weeks.

#### **b. EXCLUSION CRITERIA**

Patients of 2nd degree and 3<sup>rd</sup> degree internal haemorrhoids, Hypertension, Diabetes mellitus, Hypercholesterolemia, Pelvic tumour, Urethral stricture, Enlarged prostate, Pregnancy, Fistula in ano and other ano-rectal diseases, or any other serious illnesses are not eligible for this trial.

#### **c. WITHDRAWAL CRITERIA**

1. Development of severe drug reactions.
2. Profuse bleeding.
3. Occurrence of any other serious illness.

#### **d. TRIAL DRUG AND DURATION**

*Naagaraathi Elagam* 2 tablets [each 2.1g] b. d. with honey, after food.

Trial treatment period: 4 weeks.

## **VI. TESTS AND ASSESSMENTS**

### **a. CLINICAL ASSESSMENTS**

#### ***Siddha aspect***

Pain around the umbilicus, bleeds like splash in the pan before passing stool, pallor, weakness of the limbs, loss of energy giddiness, palpitation are present due to decrease in the total volume of blood, head ache, yellowish discolouration of the eyes are present.

#### **Modern aspect**

Constipation, Rectal bleeding, Bleeding after defecation [splash on the pan], Discharge of pus and mucous, Pruritus ani, Irritation and soreness after defaecation, Pain in all limbs.

### **b. INVESTIGATIONS**

1. Blood test: TC, DC, ESR, Hb, Bleeding time, clotting time. Blood sugar and Serum Cholesterol
2. Urine test: Albumin, Sugar, Deposit and *Neer kuri, Nei kuri*.
3. Motion test: Ova, Cyst, and Occult blood.
4. Proctoscopy.

#### **Tests in Siddha aspect**

#### ***Enn vagai Thervugal***

*Naadi, Sparisam Naa, Niram, Mozhi, Vizhi, Malam, Mooththiram.*



## **VII.CONDUCT**

Bleeding piles patients satisfying inclusion and exclusion criteria will be admitted to the trial. Informed consent will be obtained from the patients. Lab investigations will be carried out before treatment and at the end of the treatment.

For IP patients, the trial drug will be administered by the doctor and clinical assessment will be made weekly. The trial drug will be issued to the OP patients 7days at a time. Patients will be asked to come for clinical assessment once in 7 days. Also, they will be asked to bring back unconsumed drug at each visit and return them. At each visit, a new drug container will be issued to the patients.

The *Thinai, Paruva kaalam, Udal Thathukkal, Enn vagai Thervugal* of the patients will be noted.

## **VIII.FORMS**

Form I: Selection proforma

It is used before admission of the patients to the trial.

Form II: Assessment proforma

It is used once in a week during treatment.

## **IX.ANALYSIS**

Paired X<sup>2</sup>- test for changes in signs and symptoms and paired t-test for changes in objective parameters.

## Observation and Results

In the OPD/IPD 50 cases were admitted and the observations are tabulated below.

Tabulations are made for age, sex, occupation, socio-economic status, family history, food habits, *Thinai*, *Kaalam*, *Yaakai*, *Mukkuatrangal*, *Ezhu udal thaathukkal* and *Enn vagai thervugal*.

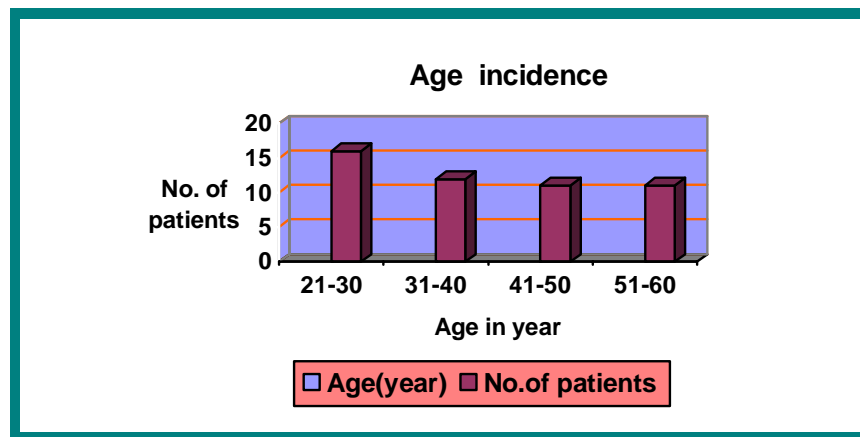
Tabulations are also made for Clinical features, Duration of illness, Position of pile mass and Improvement in the bleeding tendency in the modern aspect.

**Table-1**

### Age incidence

S.no	Age in year	No of cases	Percentage (%)
1.	21-30	16	32
2.	31-40	12	24
3.	41-50	11	22
4.	51-60	11	22
	Total	50	100

Most of the cases were between the age group of (20-30) i.e. 32%. From this it is clear that most of the cases were from (32%) *kapha kaalam* (up to 34years).

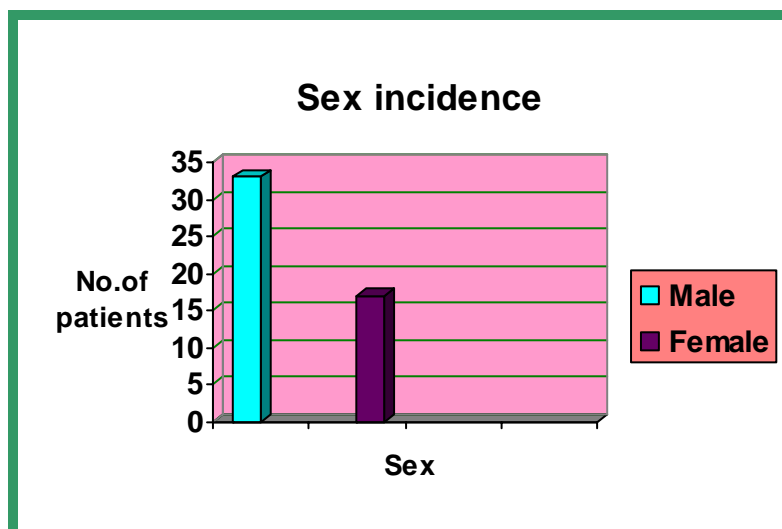


**Table-2**

**Sex incidence**

S.no	Sex	No of cases	Percentage (%)
1	Male	33	66
2	Female	17	34
	Total	50	100

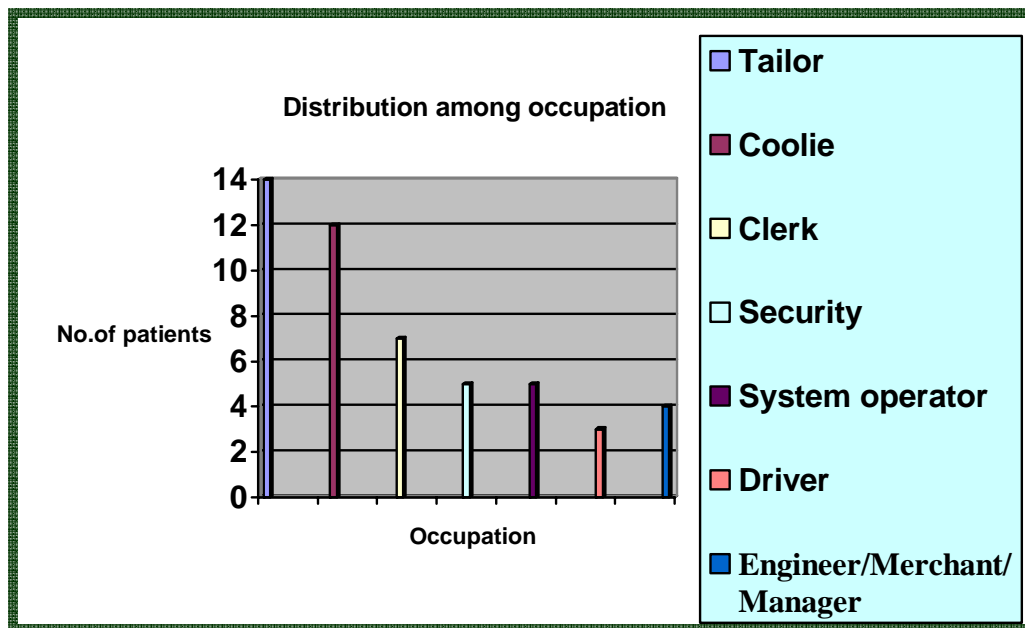
Males are affected more than female in the 50 patients.



**Table-3**  
**Occupation**

S. No	Occupation	No. of cases	Percentage (%)
1.	Tailor	14	28
2.	Coolie	12	24
3.	Clerk	7	14
4.	Security	5	10
5.	System operator	5	10
6.	Driver	3	6
7.	Merchant/Engineer/Manager	4	8
	Total	50	100

Most of the patients admitted were found to be sedentary workers.



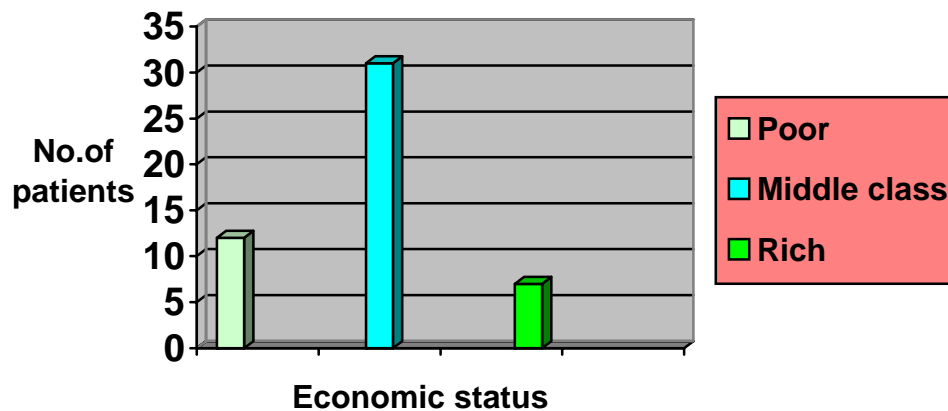
**Table-4**

**Economic status**

S.no	Economic status	No of cases	Percentage (%)
1.	Poor	12	24
2.	Middle class	31	62
3.	Rich	7	14
	Total	50	100

Out of 50 cases 12 cases were from poor, 31 cases were from middle class and 7 cases were rich.

**Distribution among economic status**

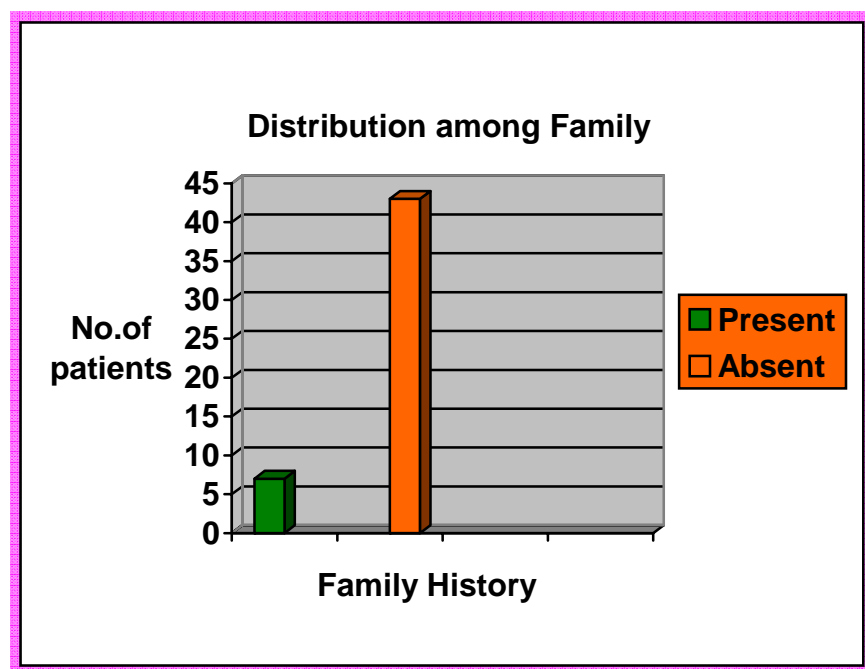


**Table-5**

**Family history**

S.no	Family history	No. of cases	Percentage (%)
1.	Positive	7	14
2.	Negative	43	86
	Total	50	100

Family history showed 7% cases were having strong family history.

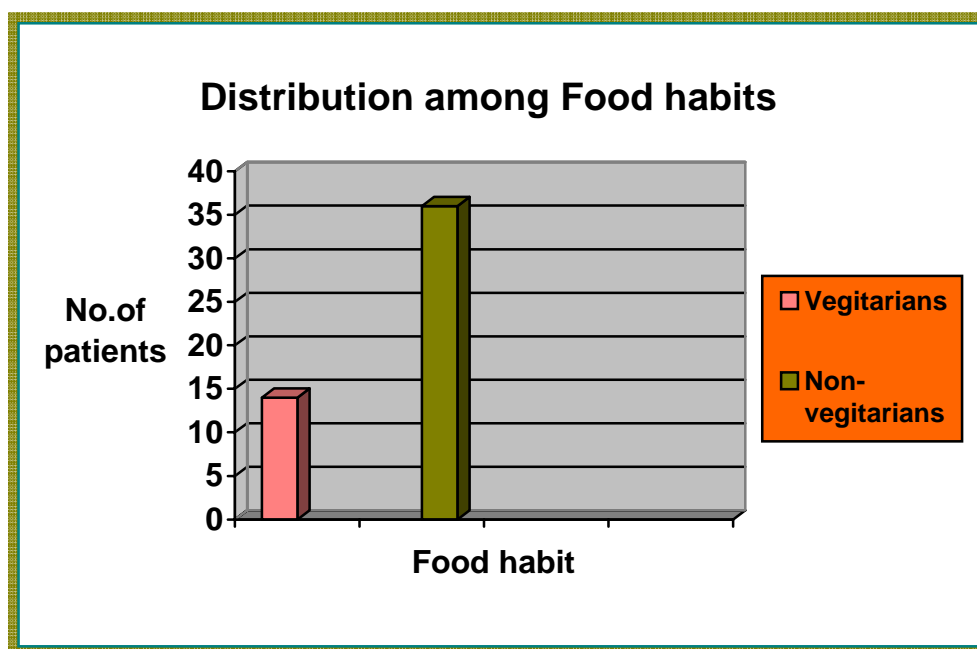


**Table-6**

**Food habits**

S.no	Food habits	No. of cases	Percentage (%)
1.	Vegetarians	14	28
2.	Non-vegetarians	36	72
	Total	50	100

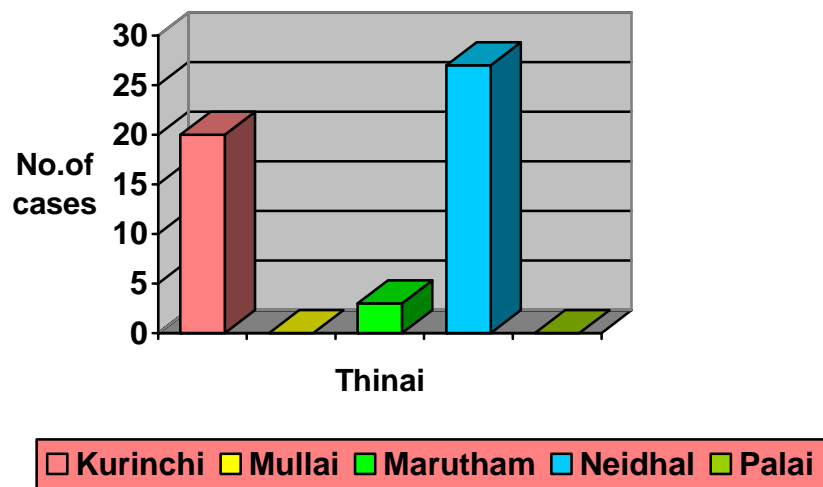
36 cases were found to be non vegetarians out of 50 patients



**Table-7****Distribution among *Thinai***

S. No	<i>Thinai</i>	No. of cases	Percentage (%)
1.	<i>Kurinji</i>	20	40
2.	<i>Mullai</i>	0	0
3.	<i>Marutham</i>	3	6
4.	<i>Neidhal</i>	27	54
5.	<i>Paalai</i>	0	0
	Total	50	100

Most of the patients are from in and around Chennai so they belonged to *Neidhal nilam*.

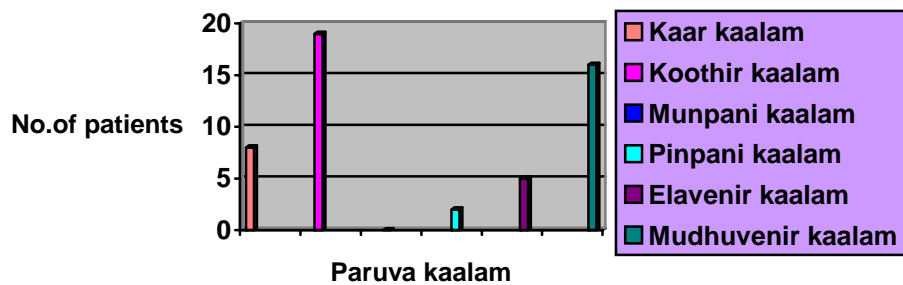
**Distribution among *Thinai***



**Table-8*****Paruva kaalangal***

S.no	<i>Paruva kaalam</i>	Months	No. of cases	Percentage (%)
1.	<i>Kaar kaalam</i>	<i>Aavani- Puratasi</i>	8	16
2.	<i>Koothir kaalam</i>	<i>Aipasi-karthigai</i>	19	38
3.	<i>Mun pani kaalam</i>	<i>Margazhi-Thai</i>	-	-
4.	<i>Pin pani kaalam</i>	<i>Masi- panguni</i>	2	4
5.	<i>Elavenir kaalam</i>	<i>Chithirai- Vaigasi</i>	5	10
6.	<i>Mudhu venir kaalam</i>	<i>Aani-Aadi</i>	16	32
		Total	50	100

38% of the patients were affected in *koothir kaalam*. 32% cases were affected in *mudhu venire kaalam*, 16% of the patients were affected in *kaar kaalam* , 10% cases were affected in *elavenir kaalam* and 4% cases were affected in *pin pani kaalam*. It is due to seasonal variations.

**Distribution among Paruva kaalam**

**Table-9*****Yaakkai***

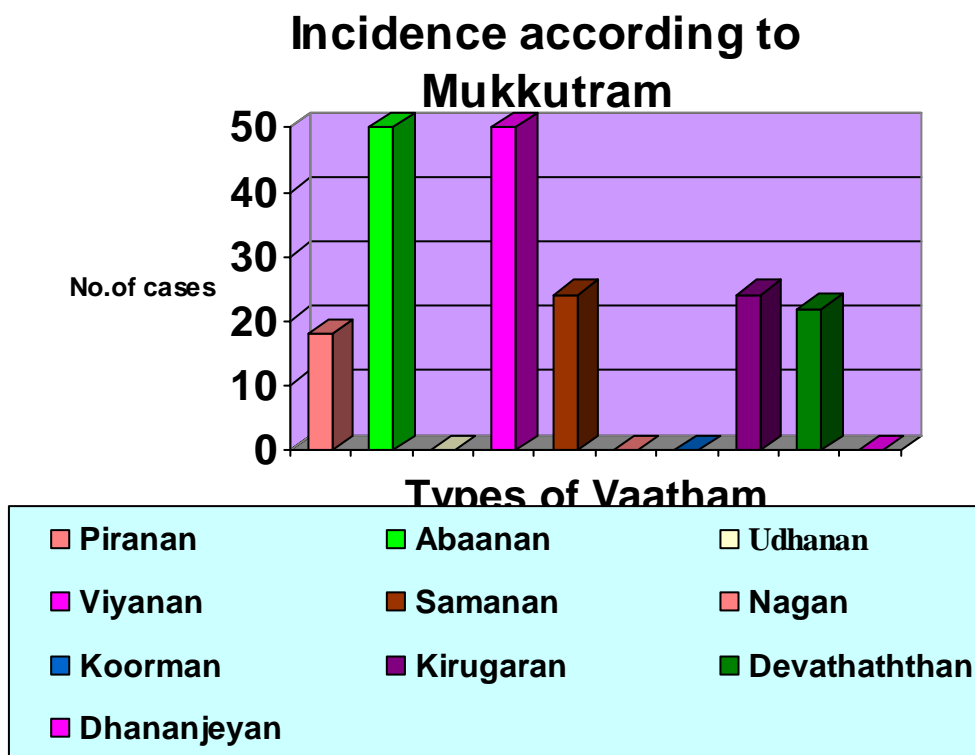
S. no	<i>Yakkai</i>	No. of cases	Percentage (%)
1.	<i>Vaatham</i>	13	26
2.	<i>Vaatha pittham</i>	17	34
3.	<i>Vaatha kapham</i>	0	0
4.	<i>Pittham</i>	8	16
5.	<i>Pittha vaatham</i>	9	18
6.	<i>Pittha kapham</i>	2	4
7.	<i>Kapham</i>		
8.	<i>Kapha vaatham</i>	0	0
9.	<i>Kapha pittham</i>	1	2
	Total	50	100

Most of the patients affected in *Rattha moolam* were *Vaatha piththa udalinar*

**Table-10****Incidence according to *Mukkutrangal*****(i)*Vaatham***

Sl. No	<i>Vaatham</i>	No. of cases	Percentage (%)
	<i>Praanan</i>	1	2
	<i>Abaanan</i>	50	100
	<i>Udhaanan</i>	0	0
	<i>Viyaanan</i>	50	100
	<i>Samaanan</i>	24	48
	<i>Naagan</i>	0	0
	<i>Koorman</i>	0	0
	<i>Kirukaran</i>	24	48
	<i>Devathaththan</i>	22	44
	<i>Thananjeyan</i>	0	0

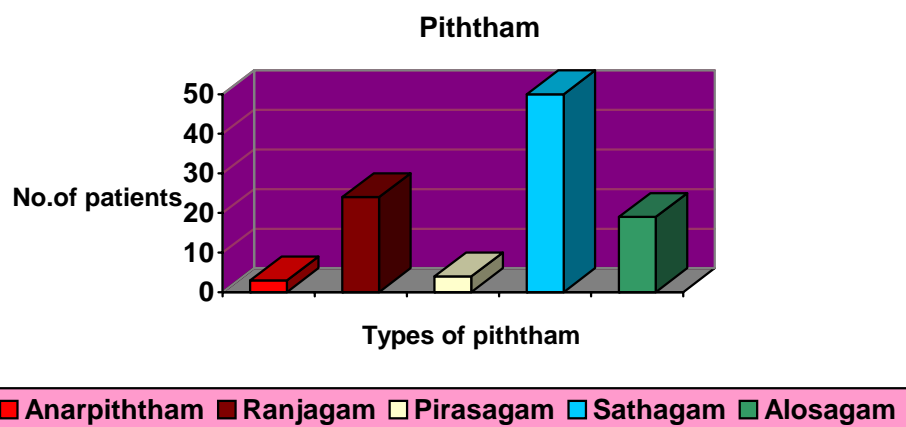
*Abaanan* and *viyaanan* were affected in all cases. *Piraanan* was affected in 1 case. *Samaanan* and *kirukaran* were affected in 24 cases and *Deva thaththan* was affected in 22 cases.



(ii) *Piththam*

S.no	<i>Piththam</i>	No. of cases out of 50	Percentage (%)
1.	<i>Anal</i>	3	6
2.	<i>Ranjagam</i>	24	48
3.	<i>Pirasagam</i>	4	8
4.	<i>Saathagam</i>	50	100
5.	<i>Aalosagam</i>	0	0

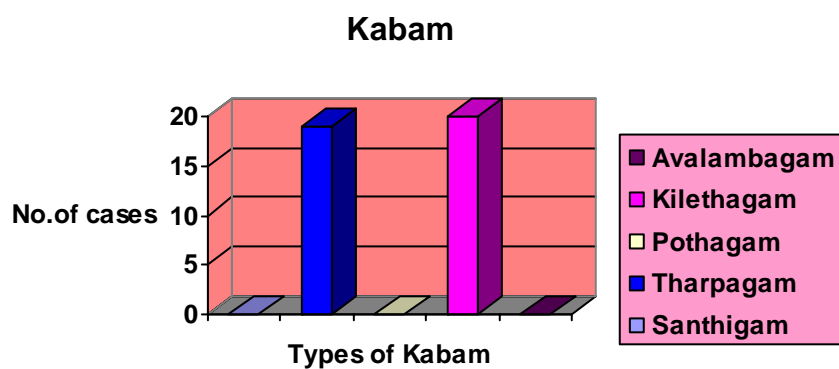
*Saathaga pittham* was affected in all cases. *Ranjaga pittham* was affected in 48% of cases. *Anal* and *pirasaga pitthams* were affected in some cases only.



**(iii) Kabam**

S.no	Kapham	No. of cases out of 50	Percentage (%)
1.	<i>Avlambgam</i>	0	0
2.	<i>Kilathagam</i>	20	40
3.	<i>Pothagam</i>	0	0
4.	<i>Tharpagam</i>	19	38
5.	<i>Santhigam</i>	0	0

*Kapham* was not affected as much as *vaatham* and *piththam*. *Kilathagam* was affected in 40% of cases and *Tharpagam* was affected in 38% cases.



**Table-11 Ezhu udal thaathukkal**

S.no	Udal thaathukkal	No .of cases out of 50	Percentage (%)
1.	<i>Saaram</i>	50	100
2.	<i>Chenneer</i>	50	100
3.	<i>Oon</i>	4	8
4.	<i>Kozhuppu</i>	4	8
5.	<i>Enbu</i>	0	0
6.	<i>Moolai</i>	0	0
7.	<i>Sukilam/Suronitham</i>	0	0

Examining *ezhu udal thathukkal* in all cases *Saaram* and *Chenneer* were affected.

**Table-12 Enn vagai thervugal**

S.no	Enn vagai thervugal	No. of cases out of 50	Percentage (%)
1.	<i>Sparisam</i>	50	100
2.	<i>Naa</i>	18	30
3.	<i>Niram</i>	15	50
4.	<i>Mozhi</i>	25	30
5.	<i>Vizhi</i>	15	30
6.	<i>Malam</i>	50	100
7.	<i>Mooththiram</i>		
	<i>i) slowly spread</i>	42	84
	<i>ii)Fastly spread</i>	4	8
	<i>iii)Muthu like</i>	4	8
8.	<i>Naadi</i>		
	<i>i)Vaatha piththam</i>	29	58
	<i>ii)Piththa vaatham</i>	19	38
	<i>iii)Piththa kapham</i>	1	2
	<i>iv)Kapha piththam</i>	1	2

In *enn vagai thervugal sprisam and malam* was affected in all cases. *Mozhi* was anxious, rapid and high pitched in 25% of cases. *Niram* and *vizhi* were affected in 30% of cases and *naa* was pale in 36% of cases. *Naadi* was *vaatha piththam* in 29 cases, *piththa vaatham* in 19 cases and *piththa kapham* and *kapha piththam* was noted in only one case.

### ***Udal vanmai***

*Udal vanmai* was found to be reduced in all the cases in two aspects. *Yakkai* and *kaalam* as evidenced by ageing illness and seasonal changes. But the *udal vanmai* can be improved in respect of *seyarkai vanmai* by the intake of nutritious diet and medicines.

**Table-13**

### **Showing the clinical features**

S. no	Clinical features	No. of cases out of 50	Percentage (%)
1.	Bright red bleeding during defaecation	50	100
2.	Constipation	50	100
3.	Irritation after defaecation	50	100
4.	Pruritus ani	7	14
5.	Loss of appetite	13	26
6.	Pain in all limbs	17	34
7.	Tiredness	31	61
8.	Giddiness	4	8
9.	Anaemia	24	48
10.	Head ache	8	16

All the 50 patients complained of constipation and bleeding per rectum. After defaecation all patients complained of soreness and 14% complained of pruritus ani.

**Table-14**

**Duration of illness**

S.no	Duration of illness	No. of cases	Percentage (%)
1.	Up to 6 Months	36	72
2.	7M to 12M	13	26
3.	13M to 18M	0	0
4.	19M to 24M	1	2
	Total	50	100

72% patients had the history of this disease up to 6months only.26% of patients suffered for 7months to 12months and 2% patient for 2 years.

**Table-15**

**Position of pile mass**

S.no	Position of pile mass	No. of cases	Percentage (%)
1.	3 o'clock	33	66
2.	7 o'clock	11	22
3.	11 o'clock	6	12
	Total	50	100

33% of cases had pile mass in 3 o'clock, 22% in 7 o'clock and 12% in 11 o'clock position.



**Table-15****Improvement in the bleeding tendency**

S.no	Improvement in the bleeding tendency	No. of cases	Percentage (%)
1.	By 1 <sup>st</sup> week	15	30%
2.	By 2 <sup>nd</sup> week	42	84%
3.	By 3 <sup>rd</sup> week	50	100%
4.	By 4 <sup>th</sup> week	50	100%

In 30% of patients bleeding was arrested on the 1<sup>st</sup> week. In 84% of patients bleeding was arrested on the 2<sup>nd</sup> week and 100% of patients bleeding were arrested on the 3<sup>rd</sup> week of drug administration.

**Table-16****Gradation of results**

Sl.no	Gradation of results	No. of patients	Percentage (%)
1.	Very good clinical improvement	22	44
2.	Good clinical improvement	24	48
3.	Fair clinical improvement	4	8
	Total	50	100

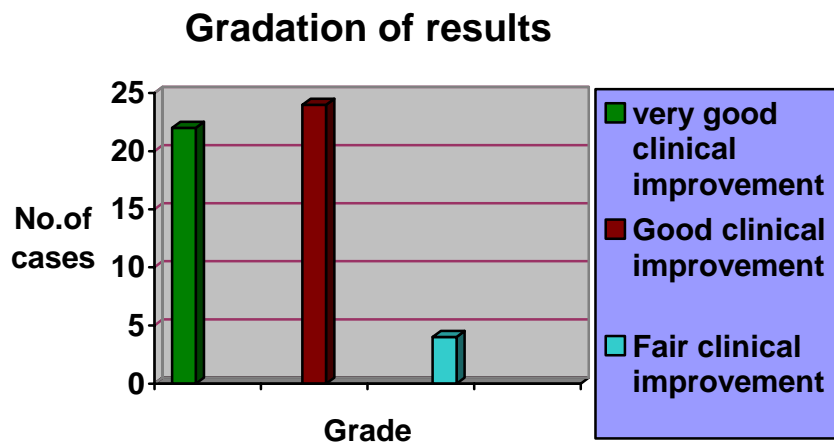


Diagram shows that 44% of cases had very good clinical improvement, 48% of cases had good improvement and 8% of cases had fair improvement.

#### **Observation of clinical laboratory examinations.**

At the time of admission to the trial, in all the 50 patients' routine blood investigations, such as total WBC count, Differential count, Erythrocyte sedimentation Rate, Bleeding time, Clotting time and Haemoglobin estimation were done. Also Blood sugar and serum cholesterol.

**Table- 17**

**Result of the analysis of Hb before and after treatment in 50 patients, NIS, Chennai, 2007.**

Variable	Mean			Paired-t	P-value
	Before treatment	After treatment	Difference		
Hb	11.7g%	12.7g%	1.0g%	10.10	<0.05

Therefore, the observed difference between mean Hb before treatment (11.7g %) and after treatment (12.7g %) is statistically significant ( $P < 0.05$ ).



### III.Laboratory investigations of 50 patients.

s.no	OP/IP no	ESR in mm				Hb g%		Bleeding time(sec)		Clotting time(sec)		Mot ion occult blood	
		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
		½hr	1hr	½hr	1hr								
1.	N7694	02	04	02	04	14.6	14.8	140	180	250	200	-ve	-ve
2.	N5845	12	20	08	12	14.2	14.8	136	160	265	250	-ve	-ve
3.	O4482	08	16	06	12	12.4	12.8	130	125	225	200	-ve	-ve
4.	O7184	06	14	06	12	14.4	14.8	100	098	230	222	-ve	-ve
5.	O9448	15	32	08	14	09.0	10.2	120	080	225	185	-ve	-ve
6.	P1332	32	64	10	20	11.2	11.8	090	110	180	180	-ve	-ve
7.	P1633	06	14	06	12	12.0	12.5	120	120	200	180	-ve	-ve
8.	P3021	12	24	12	20	13.8	14.0	140	140	250	210	-ve	-ve
9.	109	08	18	06	12	11.6	12.1	130	180	132	180	-ve	-ve
10.	P6909	16	32	10	18	11.8	12.4	120	120	180	160	-ve	-ve
11.	R9380	06	12	04	08	13.0	13.8	120	140	245	290	-ve	-ve
12.	S273	12	24	06	12	12.0	12.8	140	120	280	250	-ve	-ve
13.	S518	12	26	06	12	12.6	14.2	100	110	250	195	-ve	-ve
14.	S602	13	26	06	14	11.4	14.2	095	145	210	295	-ve	-ve
15.	464	07	16	08	16	11.2	12.8	130	150	240	250	-ve	-ve
16.	S688	02	04	02	04	12.6	13.5	170	140	250	250	-ve	-ve
17.	S1178	02	04	02	04	10.0	11.2	140	140	250	252	-ve	-ve
18.	S1223	06	14	08	14	09.8	11.8	150	140	250	240	-ve	-ve
19.	S1269	02	04	04	04	13.6	13.8	150	140	250	240	-ve	-ve
20.	S1500	04	08	04	08	12.4	12.8	085	120	220	200	-ve	-ve
21.	S1605	02	04	02	04	14.0	14.5	130	125	240	230	-ve	-ve
22.	466	04	08	04	08	12.0	12.8	140	120	240	230	-ve	-ve
23.	S1821	16	38	08	18	12.0	12.8	135	120	265	190	-ve	-ve

24.	S1870	03	06	03	06	12.0	14.0	140	135	350	340	-ve	-ve
25.	S2328	04	10	04	12	10.0	11.5	140	120	250	300	-ve	-ve
26.	S2352	10	22	02	04	09.8	10.5	160	140	230	220	-ve	-ve
27.	206	22	46	12	20	09.8	11.2	115	120	265	250	-ve	-ve
28.	S3478	08	12	02	08	10.0	12.0	140	130	290	255	-ve	-ve
29.	S5825	05	10	06	12	12.2	14.6	120	105	250	290	-ve	-ve
30.	S5841	08	16	06	12	09.8	11.8	130	120	260	148	-ve	-ve
31.	S5906	08	16	06	14	09.2	10.8	140	138	270	180	-ve	-ve
32.	S5972	02	04	04	08	12.0	12.8	120	150	250	285	-ve	-ve
33.	S6716	08	16	06	12	11.0	12.2	150	120	230	190	-ve	-ve
34.	S6860	06	14	06	12	11.4	12.1	130	120	295	250	-ve	-ve
35.	S7028	07	14	04	10	10.0	11.2	130	120	240	250	-ve	-ve
36.	491	04	08	04	08	14.6	14.8	130	100	250	190	-ve	-ve
37.	S8577	02	04	02	04	12.6	12.8	140	128	250	245	-ve	-ve
38.	S8628	04	08	02	06	12.8	12.8	170	120	260	250	-ve	-ve
39.	S9301	04	08	04	08	13.8	14.6	135	120	240	230	-ve	-ve
40.	S9794	02	04	02	04	15.0	15.2	140	100	250	180	-ve	-ve
41.	S9847	20	42	10	20	08.0	10.8	170	135	225	285	-ve	-ve
42.	T1883	06	12	04	08	12.4	12.8	140	130	280	270	-ve	-ve
43.	T2098	10	20	06	12	12.0	12.6	140	130	255	248	-ve	-ve
44.	T3648	02	04	02	04	11.0	11.8	165	140	210	190	-ve	-ve
45.	T4265	04	04	02	04	14.0	14.6	130	120	260	250	-ve	-ve
46.	513	10	20	06	12	10.6	12.5	130	120	250	190	-ve	-ve
47.	234	08	16	06	12	10.0	11.0	135	135	240	240	-ve	-ve
48.	237	06	12	04	08	10.8	11.7	135	130	260	245	-ve	-ve
49.	238	15	32	10	18	11.0	12.3	135	135	220	200	-ve	-ve
50.	525	04	08	04	08	07.8	08.4	120	125	255	230	-ve	-ve

## Discussion

The varieties of *moolam* as per the available *Siddha* literature such as *Yugi Vaidha Chinthamani*, *Siddha Maruthuvanga Churukam*, *Noi nadal Noi mudhal nadal*, *Gunavagada Thirattu*, *Aavialikum Amudhamurai Churukam*, *Thiru molar Karukkidai Vaidhyam-600*, *Agasthiar Paripooranam-400*, *Theraiyar Narambu Soothiram* etc. are being discussed in the review of literature in *Siddha* aspect. The modern aspects of haemorrhoids which include anatomy, physiology, pathology and the course of the disease are also being documented.

50 cases were selected for clinical trial according to the clinical features mentioned in *Yugi Vaidhya Chinthamani*. *Siddha* method of diagnosis was carried out for all the patients and also modern investigations and proctoscopy were done as per the protocol.

Generally from the history given by the patients the dietetic factor, occupation, constipation, mental stress and sleeplessness were found to be causative factors. These factors vitiate *vaatham* and *piththam*. The same thing is denoted in the following quotation.

Vitiation of the above two induces constipation and chronic straining during defaecation ultimately results in haemorrhoids. In the author's observation patients who are professional tailors are more prone for this disease.

### **Age distribution**

Age between 20 and 60 were selected for this study. Most of the cases were in the age group of 20 to 30. Although bleeding piles affects in all age groups particularly pregnant women as per the text books, the author of this study observed that males are frequently affected.

### **Sex distribution**

50 patients of both sexes were selected for the study. Among this 33 cases i.e.66% were male and 17 cases i.e. 34% were female, i.e. the male female ratio is 2:1.

### **Socio economic status**

Most of the patients were belonged to poor socio economic condition.

### **Personal habits**

Out of 50 patients acute and long standing cases were considered and selected for study. 14% had positive family history. Only 14% of patients treated were vegetarians and the rest were found to be taking mixed diet. 12% of patients were smokers 8% were alcoholics 6% were betel nut and tobacco chewers. There were no drug addicts.

### ***Kaalam***

Most of the cases were found from *Kapha kaalam* (up to 33 years old). From this study it was observed that most of the people belong to *Kapha kaalam* were affected.

### ***Paruva kaalam***

38% of the patients were affected in *Koothir kaalam*. The *Siddhars* concept that *piththa* is deranged from its normal state in *koothir kaalam*. But it is due to seasonal variation.

### ***Thinai***

Most of the patients 54% were belonging to *Neidhal nilam*. The *Siddhar's* concept that *Neidhal*, the costal region is salty and is a place for *piththa vaayu*.

### ***Enn vagai thervugal.***

In *Enn vagai thervugal malam* was affected all the cases, *Naa* was pale in considerable number of cases and *Naadi* was deranged in many of the cases.

### ***Udal thathukkal***

In *udal thathukkal*, *saaram* and *chenneer* was affected in all cases. Except for hemoglobin level all other routine examinations were found to be normal in all cases because the selected cases were found to be moderately nourished.

### **Trial Drug**

The drug *Naagarathi Elagam* was selected to find its efficacy in the treatment of *Raththa moolam*. The procedure for the preparation of the drug was taken from *Anupoga*



*Vaidhya Navaneetham* part 8; page no; 4. The drug is given orally at a dosage of 2 tablets (2.1gm each) bid with honey after food.

All the patients were advised to follow some restrictions and they were advised to avoid sour, acrid, spicy foods, non-vegetarian diets, tubers and unripe banana. They were advised to add greens like abutilon in their daily diet.

Bleeding was completely arrested within a week in 30% of cases. All other symptoms were found to be subsided depending upon the severity of illness. Due to the presence of *chukku* and *kadukkai pinchu*, constipation was relieved, as they are known laxatives.

Possessing **tannic acid** an astringent principle, it plays an important role in the treatment of *Raththa moolam*. Astringents coagulate the proteins in surface skin cells, which results in decreased cellular volume and a leaves a thin layer protecting underlying tissue. In addition, these agents decrease mucous and other secretions in order to decrease inflammation and irritation of the area. Astringents also provide relief of burning and itching but not of pain.

Among the six tastes *kadukkai* contains five tastes except salt, and hence it has the property of removing the diseases arising out of the non equilibrium of three humors (*vaatham*, *piththam*, *kapham*). In *moola rogam* including *Raththa moolam* deranged *vaatha* humor (“அனில பித்த தொந்தமலாது மூலம் வராது.”) is brought down to normal by the trial drug *Naagarathi elagam*, having the ingredients of *kadukkai pinchu* & *sukku* which may neutralize the deranged *vaatham*(“வாத மேலிட்டால் மதுரம் புளிப்பு”, “பித்த மதிகரிப்பின் பேசும் பரிகாரம் சுத்தத் துவரோடு சொல்லிணிப்புச் சத்தாகும், கைப்புச் சுவையே கருதவதன் வீறு”).

After completion of clinical trial patients were advised to follow *yogasanas* like *Viparithakaranai*, *Sarvangasanam*, *Sirasasanam* and *Kapalapathy* types of *Piranayama*. These prevent relapses and make the patients to feel better.

According to the severity in the clinical presentation, the cases were divided in to mild, moderate and severe cases. It was observed that out of 50 cases, 30% mild cases of *Raththa moolam* proved very good results, 54% moderate cases showed good results and 16% chronic cases showed fair result. No side effects were noted during drug administration.

Biochemical analysis revealed the presence of Tannic acid, Calcium, Potassium, Sodium chloride, Fluoride, Iron and Sulphur. The absence of Starch, Amino acid, Phosphorous, Iodine were also noted.

Pharmacological evaluation revealed that the trial drug possess the laxative and styptin.

The clinical studies in both IPD and OPD were encouraging. This is only a preliminary study and elaborate study with more number of cases must be undertaken to assess the further impact of the drug on *Raththa moolam*.

## SUMMARY

The clinical study on *Raththa moolam* with reference to its etiology, symptomatology, treatment and prognosis were carried out at the OPD and IPD of Ayothidoss Pandithar Hospital of National Institute of Siddha Chennai-47.

All the patients were treated with *Naagaraathi Elagam* 2 tablets (each weighing 2.1gm) twice a day with honey after food. The results were found to be very good in majority of cases. There was marked improvement within a week of treatment. There was good relief within 7 days of treatment in mild cases. In moderate cases good relief was found within 10 to 15 days of treatment. In long standing cases fair results were found within 21 to 28 days of treatment.

The trial drug was found to correct the deranged three humors there by correcting *Abaanan*, *Viyaanan*, *Devathaththan vaayus*, *Piththams* such as *Aanal*, *Ranjagam*, *Pirasagam*, *Saathagam* and *Alosaga piththam* and the vitiated *Kapham* were relieved from constipation, irritation and anxiety. After the treatment appetite became normal.

The clinical study confirms the efficacy of the trial drug, in controlling the bleeding and relief from the ailment. Treatment improved the functions of *Abaana vaayu* which regularizes the bowel habits and regulated other physiological and psychological processes of the body.

The Biochemical analysis of the trial drug was done in the Metex laboratory of India. The analytical report stated that the drug contains, Tannic acid, Calcium, Iron, Potassium, Sodium chloride, Fluoride and Sulphur.

No untoward effects were reported during the treatment period. All the drugs were put to use after careful purification processes as laid down for them individually in the texts.

## CONCLUSION

To conclude *Siddha* way of approach is certainly the best treatment of *Raththa moolam* in all aspects as trail drug *Naagaraathi Elagam* could avoid complications and surgical procedure. The raw drugs are readily available and easily preparable with least cost and more safety. It is clearly evident that the medicines used in the *Siddha* system do not have any harmful side effects.

The observed difference between mean Hb before treatment (11.7g %) and after treatment (12.7%) is statistically significant ( $P < 0.05$ ).

Clinical study revealed that the trial drug posses very good clinical improvement in 44% of cases, good improvement in 48% of cases and fair improvement in 8% of cases.

Because of the encouraging results clinically, the study may be undertaken with the same drugs for a prolonged period of time in more number of cases and it may throw new lights for the treatment of *Raththa moolam*.

## I. PREPARATION OF THE TRIAL DRUG

### *NAAGARATHI ELAGAM*



#### **Method of preparation:**

The outer rind of dried *Zingiber officinale* was peeled off and powdered. 35gm of this powder along with 17.5gm of powdered tender fruits of *Terminalia chebula* was mixed together and immersed in buffalo's curd. Then this mixture was grinded like butter, and fried up with a little quantity of cow's ghee. The same process i.e. immersion of the mixture in buffalo's curd for three hours grinded and fried up with cow's ghee was repeated. Again for the third time the mixture was immersed in buffalo's curd for two hours, grinded for a short period and fried up with cow's ghee until it reaches golden colour. Then the mixture was transferred to *kalvam*, grinded and made up as balls of 2.1 gm weight. Then it was preserved in glass ware.

#### **Dose:**

1to 2 tablets

**Vehicle:**

Ghee and honey

**Uses:**

*Moola vaayu, **Kuruthi eruvai moolam**, Nina kazhichal.*

**Reference:** *Anupoga Vaidhya Navaneetham, part 8; page 4.*

**Properties of the trial drug**

*சுக்கு (Chukku)*



**Botanical name:** Zingiber officinale

**Family:** Zingiberaceae.

**Part used:** Scraped and dried rhizomes as well as the green ones.

*சுவை (Taste): கார்ப்பு*

*தன்மை: வெப்பம்*

*பிரிவு (Therapeutic classification): கார்ப்பு*

**குணம் (Properties):**

“குலைமந்தம் நெஞ்செரிப்பு தோடமேப் பம்மழலை

மூலம் இரைப்பிருமல் மூக்குநீர்- வாலகப

தோடமதி சாரந் தொடர்வாத குன்மநீர்த்

தோடம்ஆ மம் போக்குஞ் சுக்கு.”

-அகத்தியர் குணவாகடம்

Dried Zingiber officinale removes indigestion, heart burn, belching, excess heat, joint pain, erraipu, cough, diarrhoea, accumulation of fluid in the nostril, gunmam, distention of the abdomen, ear ache, diseases of the face and head, anaemia, stomach ache and *iya suram*.

**Phytochemistry:**

Oleoresin, volatile oil, lipids, proteins and starch.

**Therapeutic action:**

Carminative, stimulant to the GIT, digestive, anti-emetic, anti-inflammatory. Externally, a local stimulant and rubefacient.

**Dose:**

Dried rhizome powder; 1-3gm.

**கடுக்காய் பிஞ்சு (Kadukkai pinchu)**



**Botanical name:** Terminalia chebula.

**Family:** Myrtaceae.

**Part used:** Dried fruits, immature fruits, mature fruits and galls.

**சுவை (Taste)** துவர்ப்பு இனிப்பு புளிப்பு கார்ப்பு கைப்பு.

**தன்மை:** வெப்பம்

**பிரிவு (Therapeutic classification):** இனிப்பு

**குணம் (Properties):**

“வனதுர்க்கிச் சேய்க்கு மணித்தயிலம் பூசி

அனலிற் பொரித்தாங் கருந்தத் - தினமுமலச்

சிக்கலக்க டுப்பநின்ற சீதமறுங் காற்றுகைத்த

முக்கலக்க டுப்பிருக்கு மோ”

அகத்தியர் குணவாகடம்



Tender fruits of Terminalia chebula remove **constipation**, *seetha kazhichal* (dysentery), straining (*mukkal*) arising out of *keel vaayu* and **rectal spasm**.

**Note:** Among the six tastes it contains five tastes except salt, and hence it has the property of removing the diseases arising out of the non equilibrium of three humors (*vaatha, piththa, kapha*)

### **Phytochemistry:**

Tannins, anthraquinones, chebulinic acid, chebulegic acid, chebulic acid ellagic acid, Gallic acid and vitamin C.

### **Therapeutic action:**

Safe and effective purgative (gentle laxative), astringent and alterative. Unripe fruits are more purgative and the ripe are astringent.

The purgative principle in the pericarp of the fruit has been found to be a glycoside which may be similar to sennoside. It stimulates the natural power of intestine and eliminates the faeces.

Chebulin exhibited anti-spasmodic action similar to papaverine.

### **Dose:**

2 – 4gm

### **எருமைத் தயிர்(Curd)**

### **குணம்(Properties)**

“எருமைத் தயிருக் கெரிவுபித் தம்போம்

வருமை கரப்பனொடு வாதம் - பெருமிதஞ்சேர்

தூல வடலுமாந் தூயறிவு மந்தமுறுங்

கோல விழிகுளிருங் கூறு”

-Gunapadam – thaathu seevam



Buffalo's curd alleviates generalized irritation and removes piththa diseases.

#### **Therapeutic action**

Curds are agreeable, digestive and cooling; it is acid and astringent relieves vayu, produces marrow, semen, strength and blood, aggravates piththa and kapha, helps digestion and is an appetizer.

Whey from buffalo's milk is "beneficial in spleen, piles, diarrhea and cholera"

#### **பசுநெய் (Ghee)**

#### **குணம் (Properties):**

“தாகமுழ லைசுட்கம் வாந்திபித்தம் வாயுபிர

மேகம் வயிற்றெரிவு விக்கலழல் - மாகாசங்

குன்மம் வறட்சி குடற்புரட்ட லஸ்திகட்கஞ்

சோன் மூலம் போக்குநிறைத் துப்பு”

-Gunapadam – thaathu seevam



Cow's ghee alleviates thirst, removes vomiting, predominate of piththa, vaatha visham, virana piramegam, irritation in the stomach, hiccough due to piththa, cough, stomach pain, generalized dryness and **moola rogam** (Haemorrhoids).

### **Therapeutic action**

Cow's ghee is stomachic, nutrient, anti-bilious, tonic, improves memory. Ghee is considered cooling, emollient and stomachic. It increases the fatty tissues and mental powers, improves the voice, beauty and complexion.

## II. BIOCHEMICAL ANALYSIS

### Quantitative analysis:

#### Aim:

To determine the metals and minerals in *Naagarathi elagam*

#### Instrument:

Atomic Absorption Spectrometer (AAS) with air – acetylene.

#### Apparatus and Equipment:

500 ml glass beakers, hot plate, watch glass, 100 ml standard flask.

#### Chemicals:

Nitric acid, hydrochloric acid, certified reference standards.

#### Sample preparation:

Transfer a weighed *Naagarathi elagam* in to a 500 ml beaker. Add 10 ml of 1 + 1 HNO<sub>3</sub> and 10 ml of 1+1 HCl and heat on a hot plate until the sample gets dissolved. Cool and filter to remove insoluble material. Transfer sample to 100 ml volumetric flask, adjust volume to 100 ml and mix. Take all precautions to avoid contamination at all stages. Prepare a reagent blank containing same amounts of acids used in the preparation of sample. Aspirate the standards and sample in to AAS instrument as per instrument procedure.

#### Calculation:

Percentage of the element =  $A / B \times 100$

A: Concentration of sample in ppm.

B: Dilution factor.

**Reference:** APHA 21<sup>st</sup> edition method

**Qualitative analysis:**

Sl. No	Experiment	Observation	Inference
1.	<b>Test for Starch:</b> The extract is treated with weak Iodine solution.	It does not give a blue colour.	Absence of starch.
2.	<b>Test for Amino acids:</b> One or two drops of the extract was placed on a filter paper and dried it well, after drying 1% Ninhydrin was sprayed over the same and dried it well.	No colour change occurs.	Absence of Amino acids.
3.	<b>Test for Calcium:</b> 2ml of the above prepared extract is taken in a clean test tube. To this 2ml of 4% Ammonium Oxalate solution is added.	A white precipitate is formed.	<b>Presence of Calcium.</b>
4.	<b>Test for Iron:</b> 2ml of the extract was treated with potassium ferrocyanide.	Precipate is formed	<b>Presence of Iron.</b>
5.	<b>Test for Sulphur:</b>  2ml of the extract was treated with 5% barium chloride solution.	White precipitate is formed.	<b>Presence of sulphur.</b>
6.	<b>Test for Phosphorus:</b> 2ml of the extract was treated with ammonium molybdate solution & con. Nitric acid.	No yellow precipitate is formed.	Absence of Phosphorus.
7.	<b>Test for Tannic acid.</b> The extract is treated with Ferric chloride.	It gives a dark blue precipitate.	<b>Presence of Tannic acid.</b>

**Result:**

The drug contains, Tannic acid, Calcium, Iron, Potassium, Sodium chloride, Fluoride and Sulphur.

## 1. LAXATIVE ACTIVITY OF NAAGARAATHI ELAGAM IN RATS

### Drugs

Following drugs and chemicals were required/used for the present study.

1. Castor oil
2. Charcoal
3. Atropine sulphate
4. Naagaraathi Elagam in Honey (5g/10ml Stock solution)

### EXPERIMENTAL PROCEDURE:

#### *Acute toxicity test*

*Naagaraathi Elagam* suspended in honey was administered to the groups of wistar rats in a single oral dose by using an oral feeding needle. Honey was used as vehicle. The doses of 50, 100, 250, 500, 1000 and 2000mg/kg p.o. The control group received an equal volume of the honey vehicle. Three females and three males were used for each dosage level. Observations were made and recorded systematically 1, 2, 4 and 24 h after substance administration. The visual observations included skin changes, mobility, aggressiveness, sensitivity to sound and pain, as well as respiratory movements. They were deprived of food, but not water 16–18 h prior to the administration of the test suspension. The toxicological effect was assessed on the basis of mortality

### **Intestinal motility test**

Wistar albino rats of either sex (150-250g) were obtained from the animal house of Vel's college of pharmacy, Chennai. They were fed with standard pellet diet and water was given *ad libitum*. Animals were starved 48 h prior to the experiment with free access to water and placed in six cages containing six in each as shown in Table-1. They were given the *Naagaraathi Elagam* or vehicle Honey (5ml/kg) or Atropine sulphate 5 mg/kg (I.M) or castor oil (10ml/kg). Subsequently, after 30 min, each individual rat was administered 1 ml of charcoal meal (5% activated charcoal in 10% aqueous tragacanth suspension) by oral route. These animals were sacrificed after 30 min and the abdomen was opened. The movement of charcoal meal in small intestine from pylorus was measured and it is expressed as a percentage of distance movement from pylorus to caecum.

### **Castor oil and Naagaraathi Elagam induced diarrhoea**

Prior to the commencement of experiment animals were deprived of food and water for 18 h and six animals were placed in each perforated cage. The rats were divided into five groups each containing six as shown in Table-2. The first group was treated with Honey, which served as vehicle control. The second, third and fourth groups were treated with *Naagaraathi Elagam* at different dose levels (50, 100 and 200mg/kg), Castor oil (10 ml/kg) was administered orally to fifth group of animals and all the rats were then housed in the cages, each provided with a clean filter paper at the bottom. These animals were observed for the characteristic stool and time of onset of diarrhoeal episodes. The observations were recorded every hour up to six hours.

## Statistical Analysis

The determination for the significant inter group difference, each parameter was analyzed separately and Dunnet's -test was used for comparison ( $P < 0.05$ ).

## RESULTS

### *Acute toxicity test*

During the experimental period, drug treated groups given 1000mg/kg and further doses of *Naagaraathi Elagam* orally produced remarkable toxicity signs. Mortality was observed at this dose level of 500mg/kg. The signs and symptoms of toxicity seen were severe in 500mg/kg and above dose level. So, It can be concluded that a test substance is toxic or lethal after an acute exposure to the dose level of 1000mg/kg.

### **Intestinal motility test**

The standard anti-muscarinic drug, atropine sulphate, showed significant decrease in the propulsion of the charcoal meal through the gastrointestinal tract. In castor oil-induced diarrhoea the significant increase in diarrhoeal episodes was observed ( $P < 0.01$ ). (Table-1)

### **Castor oil and Naagaraathi Elagam induced diarrhoea**

The *Naagaraathi Elagam* at 100&200mg/kg dose range showed significant increase in the diarrhoea by means of the characteristic stool elimination and the time of onset of diarrhoeal episodes was 20minutes after drug administration as compared to control group.



The *Naagaraathi Elagam* did not show any significant action at lower dose level on the intestinal motility as well as diarrhoeal action. (Table-2)

## **DISCUSSION**

The anitmuscaranic drug atropine decreased intestinal propulsive movement in charcoal meal treated animal models. These observations suggest that *Naagaraathi Elagam* induced the diarrhoea by increasing intestinal peristalsis and gastrointestinal motility. There has been a statistically significant induction in the incident of diarrhoea in experimental animal models. *Naagaraathi Elagam* and the comparative standard diarrhoeal agent castor oil, increased the frequency of defecation, faecal droppings significantly.

Castor oil and arachidonic acid increase peristaltic activity and produce permeability changes in the intestinal mucus membranes to electrolyte and water, effects associated with prostaglandin release. Further studies are required to establish the active principles present in the *Naagaraathi Elagam*, which is responsible for the diarrhoeal activity.

**Table 1****Effect of *Naagaraathi Elagam* on gastrointestinal motility after charcoal meal**

Sl.No.	Group	Dose (mg/kg)	Mean % of movement of charcoal $\pm$ SEM
1	Vehicle (Honey)	5ml/kg	62.52 $\pm$ 2.04
2	Atropine sulphate	5	39.21 $\pm$ 1.0
3	<i>Naagaraathi Elagam</i>	50	57.16 $\pm$ 1.66*
4	<i>Naagaraathi Elagam</i>	100	74.28 $\pm$ 3.14**
5	<i>Naagaraathi Elagam</i>	200	81.12 $\pm$ 3.33**
6	Castor oil	10ml/kg	92.16 $\pm$ 3.98**

Values are expressed as mean  $\pm$  SEM; \*\*P<0.01; \*P<0.05 Vs Control group; n=6.

**Table 2.**

**Diarrhoeal effect of *Naagaraathi Elagam* and Castor oil.**

Sl.No.	Group	Dose (mg/kg)	Mean of defecation $\pm$ SEM after 6 h (gms/kg body weight)
1	Vehicle Control (Honey)	5ml/kg	23.52 $\pm$ 0.33
2	Atropine sulphate	5	3.86 $\pm$ 0.35
3	<i>Naagaraathi Elagam</i>	50	18.62 $\pm$ 0.46
4	<i>Naagaraathi Elagam</i>	100	38.13 $\pm$ 0.49*
5	<i>Naagaraathi Elagam</i>	200	44.88 $\pm$ 0.68**
6	Castor oil	10ml/kg	67.11 $\pm$ 1.42**

Values are expressed as mean  $\pm$  SEM; \*\*P<0.01; \*P<0.05 Vs Control group; n=6.

## 2. STYPTIC ACTION OF NAAGARAATHI ELAGAM IN RATS

The present study was undertaken to study styptic activity of *Naagaraathi Elagam*- A Siddha drug and was assessed by the liver bleeding method in rats.

### INTRODUCTION

*Naagaraathi Elagam*, a widely used drug in siddha system of medicine, contains tannic acid and is often used to treat *Moola vaayu*, ***Kuruthi eruvai moolam***, *Nina kazhichal*. Due to the widespread use of this drug in clinical practice to treat several diseases, the objective of the present study was to obtain data on the styptic activity of this formulation.

### MATERIALS AND METHODS

#### Experimental Animals:

Adult albino rats of either sex 9-12 months old with an initial weight of 110 to 180 g were selected and divided into four groups containing 6 rats in each group and they were kept in a temperature-controlled environment ( $23 \pm 2^{\circ}\text{C}$ ). Animals were deprived of food and water for 16 hours before starting of the dissection.

#### Drug Treatment:

Fasted rats were divided into 4 groups of six rats each.

Group I served as a control, received honey orally for three days.

Group II-IV received *Naagaraathi Elagam* at a dose of 100 and 200mg/kg body weight as a fine aqueous suspension orally for three days and also administered on open liver wound at the time of bleeding.

## **Induction of Experimental Bleeding**

After last dosing of *Naagaraathi Elagam* oral administration and 30 minutes of absorption period, the animals were placed on the dissection board and the animals were anesthetized using anesthetic ether. The abdomen of the animals was cut opened carefully without any damage to the major blood vessels under ether anesthesia, the left lobe of liver was located in the abdominal cavity and the tip is wounded carefully by making an incision to induce bleeding. Simultaneously the timer was switched on and the blood traces were fixed on the blotting paper at different time intervals in room temperature ( $27\pm 2^{\circ}\text{C}$ ). The time at which the bleeding ceased from the liver lobe was noted.

## ***Statistical Analysis***

The results are expressed as means  $\pm$  S.E.M. Data were analyzed by using one-way ANOVA followed by Dunnet test. **P values of  $<0.05$  were considered as significant.**

## **RESULTS:**

The experimental data showed that, the bleeding time of normal and control group of animals was found to have slightly greater than the *Naagaraathi Elagam* treated animals bleeding time. This suggests that there is a considerable influence on bleeding time in rats but it is not statistically significant.

Though the test drug is showing some changes in the ceassation of hemorrhage, for the establishment of mechanism involved in this requires further systematic study.

**Table-1:****Effect of *Naagaraathi Elagam* on bleeding time in rats**

S.No.	Group and Treatment	Bleeding time in seconds
1	I- Control- Honey (2ml/kg)	128±12.02
2	II- <i>Naagaraathi Elagam</i> (100mg/kg)	114±16.18
3	III- <i>Naagaraathi Elagam</i> (200mg/kg)	109±8.44
4	IV- Normal control (2ml saline)	123±13.62

Values are expressed as Mean values of 6 animals  $\pm$  S.D. Comparison made between test and control groups (Dunnett's test). Control group received vehicle honey only. No significant difference was observed in any drug treated groups.

# NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47

## AN OPEN TRIAL OF A SIDDHA DRUG NAAGARAATHI ILAGAM FOR THE TREATMENT OF RATTHA MOOLAM [BLEEDING PILES]

### FORM I – SELECTION PROFORMA

1. OP/ IP No: \_\_\_\_\_ 2. BED No: \_\_\_\_\_ 3. S. No: \_\_\_\_\_

4. NAME: \_\_\_\_\_ 5. AGE: \_\_\_\_\_ Yrs. 6. GENDER: \_\_\_\_\_

7. OCCUPATION: \_\_\_\_\_

8. POSTAL ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. COMPLAINTS & DURATION: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

10. HISTORY OF PRESENT ILLNESS: \_\_\_\_\_

\_\_\_\_\_

11. PAST HISTORY: \_\_\_\_\_

\_\_\_\_\_

12. FAMILY HISTORY: 1.NO ☐ 2. Yes ☐ \_\_\_\_\_

### PERSONAL HISTORY INCLUDING HABITS

	Yes	No
13. Smoker	<input type="checkbox"/>	<input type="checkbox"/>
14. Alcoholic	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
15. Betel nut chewer	<input type="checkbox"/>	<input type="checkbox"/>
16. Non-Vegetarian	<input type="checkbox"/>	<input type="checkbox"/>
17. Drug addiction	<input type="checkbox"/>	<input type="checkbox"/>

#### GENERAL EXAMINATION:

18. Body weight [Kg]	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	
19. Height [cm]	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	
20. Body Temperature [F]	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	
21. Blood Pressure (mmHg)	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	/ <input type="text"/> <input type="text"/> <input type="text"/>
22. Pulse Rate /min.	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	
23. Heart Rate / min.	:	<input type="text"/>	<input type="text"/>	<input type="text"/>	
24. Respiratory Rate /min.	:	<input type="text"/>	<input type="text"/>		
		Yes	No		
25. Pallor	:	<input type="checkbox"/>	<input type="checkbox"/>		
26. Jaundice	:	<input type="checkbox"/>	<input type="checkbox"/>		
27. Clubbing	:	<input type="checkbox"/>	<input type="checkbox"/>		
28. Cyanosis	:	<input type="checkbox"/>	<input type="checkbox"/>		
29. Pedal Oedema	:	<input type="checkbox"/>	<input type="checkbox"/>		
30. Lymph adenopathy	:	<input type="checkbox"/>	<input type="checkbox"/>		
31. Engorged veins	:	<input type="checkbox"/>	<input type="checkbox"/>		
32. Abdominal distension	:	<input type="checkbox"/>	<input type="checkbox"/>		
33. Jugular venous pulsation	:	<input type="checkbox"/>	<input type="checkbox"/>		
34. Tracheal deviation	:	<input type="checkbox"/>	<input type="checkbox"/>		

#### SYSTEMIC EXAMINATION FOR BLEEDING PILES

Inspection	Yes	No
35. Inflammation in the Peri anal area & anus	: <input type="checkbox"/>	<input type="checkbox"/>
36. Anal skin tags	: <input type="checkbox"/>	<input type="checkbox"/>
37. Pruritus	: <input type="checkbox"/>	<input type="checkbox"/>
38. Anal warts	: <input type="checkbox"/>	<input type="checkbox"/>
39. Fistula- in –ano	: <input type="checkbox"/>	<input type="checkbox"/>



	Yes	No
40. Pilonidal sinus	: <input type="checkbox"/>	<input type="checkbox"/>
41. Anal fissure	: <input type="checkbox"/>	<input type="checkbox"/>
42. Perianal haematoma	: <input type="checkbox"/>	<input type="checkbox"/>
43. Prolapsed strangulated piles	: <input type="checkbox"/>	<input type="checkbox"/>
44. Perianal abscess	: <input type="checkbox"/>	<input type="checkbox"/>
45. Ischiorectal abscess	: <input type="checkbox"/>	<input type="checkbox"/>
46. Presence of any ulceration	: <input type="checkbox"/>	<input type="checkbox"/>

### CLINICAL EXAMINATION OF BLEEDING PILES

	Yes	No
47. Constipation	: <input type="checkbox"/>	<input type="checkbox"/>
48. Rectal bleeding	: <input type="checkbox"/>	<input type="checkbox"/>
49. Bright red bleeding occurs during defecation [Splash in the pan]	: <input type="checkbox"/>	<input type="checkbox"/>
50. Pruritus ani	: <input type="checkbox"/>	<input type="checkbox"/>
51. Irritation & soreness after defecation	: <input type="checkbox"/>	<input type="checkbox"/>
52. Mucous discharge	: <input type="checkbox"/>	<input type="checkbox"/>
53. Loss of appetite	: <input type="checkbox"/>	<input type="checkbox"/>
54. Pain in all limbs	: <input type="checkbox"/>	<input type="checkbox"/>
55. Tiredness	: <input type="checkbox"/>	<input type="checkbox"/>
56. Anaemia	: <input type="checkbox"/>	<input type="checkbox"/>
57. Giddiness	: <input type="checkbox"/>	<input type="checkbox"/>
58. Head ache	: <input type="checkbox"/>	<input type="checkbox"/>

### EXAMINATION OF OTHER SYSTEM

	Normal	Abnormal	
59. CVS	: <input type="checkbox"/>	<input type="checkbox"/>	.....
60. RS	: <input type="checkbox"/>	<input type="checkbox"/>	.....
61. CNS	: <input type="checkbox"/>	<input type="checkbox"/>	.....

## SIDDHA ASPECTS

### 62. NILAM:

1. Kurinji ☐ 2. Mullai ☐ 3. Marutham ☐ 4. Neithal ☐ 5. Palai ☐

### 63. KALA IYALBU:

1. Kaarkaalam ☐ 2. Koothirkaalam ☐ 3. Munpanikaalam ☐  
4. Pinpanikaalam ☐ 5. IlavenirKaalam ☐ 6. Muduvenirkaalam ☐

### 64. YAAKKAI:

1. Vatham ☐ 2. Pitham ☐ 3. Kabam ☐  
4. Vatha pitham ☐ 5. Pitha vatham ☐ 6. Kaba vatham ☐  
7. Vatha kabam ☐ 8. Pitha kabam ☐ 9. Kaba pitham ☐

### 65. GUNAM:

1. Sathuvam ☐ 2. Rasatham ☐ 3. Thamasam ☐

### IYMPORIGAL:

	Normal	Affected	
66. Mei	<input type="checkbox"/>	<input type="checkbox"/>	.....
67. Vaai	<input type="checkbox"/>	<input type="checkbox"/>	.....
68. Kan	<input type="checkbox"/>	<input type="checkbox"/>	.....
69. Mookku	<input type="checkbox"/>	<input type="checkbox"/>	.....
70. Sevi	<input type="checkbox"/>	<input type="checkbox"/>	.....

### KANMENDHIRIUM / KANMAVIDAYAM

	Normal	Affected	
71. Kai	<input type="checkbox"/>	<input type="checkbox"/>	.....
72. Kaal	<input type="checkbox"/>	<input type="checkbox"/>	.....
73. Vaai	<input type="checkbox"/>	<input type="checkbox"/>	.....
74. Eruvaai	<input type="checkbox"/>	<input type="checkbox"/>	.....
75. Karuvaai	<input type="checkbox"/>	<input type="checkbox"/>	.....

### UYIR THATHUKKAL

#### Vatham

	Normal	Affected	
76. Pranan	<input type="checkbox"/>	<input type="checkbox"/>	.....
77. Abanan	<input type="checkbox"/>	<input type="checkbox"/>	.....
78. Viyanan	<input type="checkbox"/>	<input type="checkbox"/>	.....

	Normal	Affected	
79. Uthanan	<input type="checkbox"/>	<input type="checkbox"/>	.....
80. Samanan	<input type="checkbox"/>	<input type="checkbox"/>	.....
81. Nagan	<input type="checkbox"/>	<input type="checkbox"/>	.....
82. Koorman	<input type="checkbox"/>	<input type="checkbox"/>	.....
83. Kirukaran	<input type="checkbox"/>	<input type="checkbox"/>	.....
84. Devathathan	<input type="checkbox"/>	<input type="checkbox"/>	.....
85. Dhananjeyan	<input type="checkbox"/>	<input type="checkbox"/>	.....

### **Pittham**

	Normal	Affected	
86. Analam	<input type="checkbox"/>	<input type="checkbox"/>	.....
87. Ranjagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
88. Sathagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
89. Alosagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
90. Prasagam	<input type="checkbox"/>	<input type="checkbox"/>	.....

### **Kabam**

	Normal	Affected	
91. Avalambagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
92. Kilethagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
93. Pothagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
94. Tharpagam	<input type="checkbox"/>	<input type="checkbox"/>	.....
95. Santhigam	<input type="checkbox"/>	<input type="checkbox"/>	.....

### **UDAL THAATHUKKAL**

	Normal	Affected	
96. Saaram	<input type="checkbox"/>	<input type="checkbox"/>	.....
97. Senneer	<input type="checkbox"/>	<input type="checkbox"/>	.....
98. Oon	<input type="checkbox"/>	<input type="checkbox"/>	.....
99. Kozhuppu	<input type="checkbox"/>	<input type="checkbox"/>	.....
100. Enbu	<input type="checkbox"/>	<input type="checkbox"/>	.....
101. Moolai	<input type="checkbox"/>	<input type="checkbox"/>	.....
102. Sukkilam / Suronitham	<input type="checkbox"/>	<input type="checkbox"/>	.....

## ENVAGAI THERVUGAL

	Normal	Affected	
103. Sparisam	<input type="checkbox"/>	<input type="checkbox"/>	.....
104. Naa	<input type="checkbox"/>	<input type="checkbox"/>	.....
105. Niram	<input type="checkbox"/>	<input type="checkbox"/>	.....
106. Mozhi	<input type="checkbox"/>	<input type="checkbox"/>	.....
107. Vizhi	<input type="checkbox"/>	<input type="checkbox"/>	.....

### Malam

	Normal	Affected	
108. Niram	<input type="checkbox"/>	<input type="checkbox"/>	.....
109. Nurai	<input type="checkbox"/>	<input type="checkbox"/>	.....
110. Kirumi	<input type="checkbox"/>	<input type="checkbox"/>	.....
111. Kalappu	<input type="checkbox"/>	<input type="checkbox"/>	.....
112. Thanmai			

	Yes	No
1. Irugal	<input type="checkbox"/>	<input type="checkbox"/>
2. Ilagal	<input type="checkbox"/>	<input type="checkbox"/>

### Moothiram

#### Neerkuri

	Normal	Affected	
113. Niram	<input type="checkbox"/>	<input type="checkbox"/>	.....
114. Manam	<input type="checkbox"/>	<input type="checkbox"/>	.....
115. Edai	<input type="checkbox"/>	<input type="checkbox"/>	.....
116. Nurai	<input type="checkbox"/>	<input type="checkbox"/>	.....
117. Enjal	<input type="checkbox"/>	<input type="checkbox"/>	.....

#### Neikuri

118. Naadi .....

## LAB INVESTIGATIONS

### Blood

119. TC (Cells/Cumm)-	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
	<input type="text"/>	<input type="text"/>			<input type="text"/>	<input type="text"/>	
DC (%)	120.N-	<input type="text"/>	<input type="text"/>	121.L-	<input type="text"/>	<input type="text"/>	<input type="text"/>
	122. M-	<input type="text"/>	<input type="text"/>	123.E-	<input type="text"/>	<input type="text"/>	124.B-
ESR (mm)		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
127. Hb (gm%)	-				125.½ hr-	<input type="text"/>	126.1 hr-

**Blood Sugar (mg %)**

128. Fasting  129. Post Prandial  130. Random

131. Serum Cholesterol (mg %)

132. Bleeding time (sec)

133. Clotting time (sec)

**URINE**

	Present	Absent	
134. Albumin	<input type="text"/>	<input type="text"/>	.....

135. Sugar	<input type="text"/>	<input type="text"/>	.....
<b>Deposit</b>			.....

	Present	Absent	
136. Pus cells	<input type="text"/>	<input type="text"/>	.....
137. Epithelial cells	<input type="text"/>	<input type="text"/>	.....
138. Red blood cells	<input type="text"/>	<input type="text"/>	.....
139. Casts/Crystal	<input type="text"/>	<input type="text"/>	.....

**MOTION**

	Present	Absent
140. Ova -	<input type="text"/>	<input type="text"/>
141. Cyst -	<input type="text"/>	<input type="text"/>
142. Occult blood -	<input type="text"/>	<input type="text"/>
143. Pus cells -	<input type="text"/>	<input type="text"/>

**144. Proctoscopy: Position of piles**

(1) 3 o'clock  (2) 7 o'clock  (3) 11 o'clock

**INCLUSION CRITERIA**

	Yes	No
145. Patients of bleeding piles (1 <sup>st</sup> degree internal haemorrhoids)	<input type="text"/>	<input type="text"/>
146. Age between 20 to 60 years	<input type="text"/>	<input type="text"/>
147. Willing to be admitted in the hospital or willing to attend the OPD once a week for 4 weeks	<input type="text"/>	<input type="text"/>
148. Willing to give blood specimen for the investigation when required	<input type="text"/>	<input type="text"/>

**EXCLUSION CRITERIA**

	Yes	No
149. Diabetes mellitus	<input type="text"/>	<input type="text"/>
150. Hypertension	<input type="text"/>	<input type="text"/>

	Yes	No	
151. 2 <sup>nd</sup> /3 <sup>rd</sup> degree internal haemorrhoids	<input type="checkbox"/>	<input type="checkbox"/>	
152. Pelvic tumour	<input type="checkbox"/>	<input type="checkbox"/>	
153. Urethral stricture	<input type="checkbox"/>	<input type="checkbox"/>	
154. Fistula in ano	<input type="checkbox"/>	<input type="checkbox"/>	
155. Pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
156. Enlarged prostate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(\* NA- Not Applicable)

157. Admitted to trial: 1. Yes ☐ 2. No ☐

158. If yes, S. No:

159. IP/ OP: 1. IP ☐ 2. OP ☐

160. Drugs issued for O.P. Patients:

No. of tablets:

161. Date: .....

162. Signature of Doctor

# **NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47**

## **AN OPEN TRIAL OF A SIDDHA DRUG (*NAAGARATHI ILAGAM*) FOR THE TREATMENT OF BLEEDING PILES (*RATTHA MOOLAM*)**

### **CONSENT FORM**

#### **Certificate by Investigator**

I certify that I have disclosed all details about the study in the terms readily understood by the patient.

Date: .....

Signature: .....

Name: .....

#### **Consent by Patient**

I have been informed to my satisfaction, by the attending physician, the purpose of the clinical trial, and the nature of drug treatment and follow-up including the laboratory investigations to be performed to monitor and safeguard my body functions.

I am aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

I, exercising my free power of choice, hereby give my consent to be included as a subject in the clinical trial of *Naagarathi ilagam* for the management of bleeding Piles (*Rattha moolam*).

Date: .....

Signature: .....

Name: .....

Date: .....

Signature of Witness: .....

Name: .....

Relationship: .....

## BIBLIOGRAPHY

1. Agasthiyar-1200
2. Agasthiyar Gunavagadam. C.P.Samy, Malaiappasamy Vaithiyasalai, Palani.
3. Agasthiyar Gunavagada Thirattu.
4. Agasthiyar Kanma Kandam, Thamarai noolagam, Chennai.
5. Agasthiyar Paripooranam, S.P.Ramachandran, Thamarai noolagam, Chennai.
6. Aavialikkum Amudhamurai Churukkam.
7. Anubava Vaidhya Deva Ragasiyam, J.Geetharam prasath, Rathnanayakar& sons, Chennai.
8. Anuboga vaidhya navaneetham, part; 8, Hakeem.P.M.Abdhullah sayabu, Thamarai noolagam, Chennai.
9. Athma Ratchamitham ennum Vaidhya Sara sangiragam.
10. Cega Rasa Kesaram.
11. Gunavagadam, Anushya publication, Kuntrathur, Chennai-69.
12. Gunavagada noin saaram.
13. Gunapadam (Porut panbu nool), part-I, S. Murugesu mudhaliyar, Dept.of Indian medicine and Homeopathy, Chennai-106.
14. Gunapadam Thathu seeva vaguppu; Part 2&3, R.Thiyagarajan, Dept.of Indian medicine and Homeopathy, Chennai-106.
15. Jeeva Ratchamirtham.NoI naadal Noi mudhal naadal, part I&II, M.Shanmuga velu.Dept.of Indian medicine and Homeopathy, Chennai-106.
16. Pathinen Siddhar aruli seidha naadi.
17. Rathna churukkam-500.
18. Sathaga naadi.
19. Sattai muni naadi.



20. Sattai muni gnanam, S.P.Ramachandran, Thamarai noolagam, Chennai.
21. Siddhar anubava vaidhya seyimuraigal.
22. Siddhar Aruvai maruthuvam, S.K. Uthamarayan, Dept. of Indian medicine and Homeopathy, Chennai-106.
23. Siddha maruthuvam (pothu), K.N. Kuppusamy mudhaliar, Dept. of Indian Medicine and Homeopathy, Chennai-106.
24. Soothamuni naadi.
25. Subramaniyar varma avathai nithanam.
26. Tamil-English Agarathy, T.V.Sambasivam pillai.
27. Thanvandhri vaidhyam, S.P.Ramachandran, Thamarai noolagam, Chennai.
28. Theraiyar narambu soothiram-150.
29. Theraiyar segarappa.
30. Thirumoolar karukkidai vaidhiyam-600, S.P. Ramachandran, Thamarai noolagam, Chennai.
31. Thirumoolar naadi nool.
32. Thiruvalluva gnayanar navarathina chinthamani-800.
33. Udal koorugal, R.Thiyagarajan, Dept. of Indian medicine and Homeopathy, Chennai-106.
34. Udal thathuvam, P.M.Venugopal, Dept. of Indian medicine and Homeopathy, Chennai-106.
35. Thotra kirama Aaraichium siddha maruthuva varalarum, S.K.Uthamarayan, Dept. of Indian medicine and Homeopathy, Chennai-106.
36. Vallathi Naadi.
37. Yakobu Vaidhiyam-300, R.C. Mohan, Thamarai noolagam, Chennai.
38. Yugi Vaidhiya Chinthamani, Yugi munivar, Dept. of Indian medicine and Homeopathy, Chennai-106.

39. Vaidhiya Sara Sangiragam, V.Kandha samy mudhaliyar, Niickar& sons.
40. Siddha principles of social& preventive medicine, D. Durairasan, Dept. of Indian Medicine and Homeopathy, Chennai-106
41. A Compendium of Siddha Doctrine.
42. Indian Materia Medica, vol I & II, Dr. K.M. Nadkarni, Bombay popular prakasan pvt. ltd.
43. Indian Medicinal plants, Kirtikar&Basu, Bishen singh mahendra palsing, Dehradun.
44. WHO monograph on selected medicinal plants, Vol-I, Aitbs publishers, India.
45. Indian Herbal Pharmacopoeia, Indian drug manufactures association, Mumbai.
46. Wealth of India, Council of scientific Industrial Research. New Delhi.
47. Bailey & Love's Short practice of surgery, Edward Arnold ltd, New York.
48. Clinical Diagnosis and Management by laboratory methods, John Bernard Henry, W.B, Saunders company, Philadelphia.
49. Anderson's Pathology, Ivan Damjanov & James Linder, Mosby, St. Louis, Missouri.
50. Gray's Anatomy, Elsevier, Churchil Livingston.
51. Current medical Diagnosis & Treatment, Lawrence M. Tierney, Stephan J.Mc phее & Maxine A. Papadakis, the Mc Graw-Hill companies, USA.
52. A manual on clinical Surgery, Somen Das, Culcuta, India.
53. Hutchison's clinical methods, Michael swash, Saunders, Elsevier Science ltd.
54. Text book of Natural medicine, vol. I, Joseph E. Pizzorno Jr, Michael T. Murray. Harcourt publisher ltd, Edinburgh.
55. Clinical procedures in Emergency medicine, JamesR. Robert & Jerris R. Hedges, Saunders - An Imprint of Elsevier, Philadelphia.

56. Clinical skills, IAN.A.D Bouchier&John S. Morris W.B Saunders company ltd, London.
57. Current Diagnosis & Treatment in Gastro enterology, Scott L.Friedman, Kenneth R.Mc Quaid, James H.Gradell, Mc Graw- Hill companies, Asia.
58. Gastro intestinal Disease an Endoscopic Approach. Anthony J. Dimarino & Stanly B.Benjamin, Slack Incorporated, Thorofare.USA.
59. 20 Common problems in Gastroenterology, Steven A.Edmundowicz, Mc Graw-Hill companies, Asia.
60. Cunningham's Manual of practical Anatomy, Vol .II, G.J. Romanes, Oxford university press, New York.
61. Davidson's principles and practice of Medicine, Elsevier science ltd, Philadelphia.
62. Brocklehurst's text book of Geriatric Medicine & Gastroenterology, Raymond C Tallis, Howard M Fillit, Elsevier science ltd, Spain.
63. Text book of Medical Physiology, Arthur C.Guyton & John E.Hall, Saunders, an Imprint of Elsevier, Pennsylvania.
64. <http://en.wikipedia.org/Haemorrhoids>.
65. <http://www.Emedicinehealth.com/hemorrhoids/article-em.htm-33k>
66. [Www. Aafp.org/ afp/20010701/77.html-71k](http://www.Aafp.org/afp/20010701/77.html-71k)